CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2006-0096
NPDES NO. CA0079651

WASTE DISCHARGE REQUIREMENTS FOR LINDA COUNTY WATER DISTRICT WASTEWATER TREATMENT PLANT YUBA AND SUTTER COUNTIES

The following Discharger is authorized to discharge in accordance with the conditions in this Order:

Discharger	Linda County Water District
Name of Facility	Wastewater Treatment Plant
Facility Address	909 Myrna Avenue
	Marysville, CA 95901
	Yuba County (WWTP), Sutter County (disposal ponds and proposed outfall)

The Discharger is authorized to discharge from the points described below:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
EFF-001	Treated Municipal Wastewater	39º 05' 42" N	121º 35' 32" W	Feather River
EFF-002	Treated Municipal Wastewater	39º 05' 41" N	121º 35' 20" W	Feather River, via Evaporation/Percolation Ponds within floodplain

This Order was adopted by the Regional Water Board on:	**22 September 2006**
This Order shall become effective on:	**50 days after adoption date**
This Order shall expire on:	**11 November 2011**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a **major** discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, **not later than 180 days in advance of the Order expiration date** as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Waste Discharge Requirements Order No. 5-00-165 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted therein, and the provisions of the Federal Clean Water Act (CWA), and regulations and guidelines adopted therein, the Discharger shall comply with the requirements in this Order.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **22 September 2006**.

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PAMELA C. CREEDON
Executive Officer

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I. FACILITY INFORMATION

THE FOLLOWING DISCHARGER IS AUTHORIZED TO DISCHARGE IN ACCORDANCE WITH THE CONDITIONS SET FORTH IN THIS ORDER:

Discharger	Linda County Water District
Name of Facility	Wastewater Treatment Plant
Facility Address	909 Myrna Avenue Marysville, CA 95901 Yuba County (WWTP), Sutter County (disposal ponds and proposed outfall)
Facility Contact, Title, and Phone	John Harvey (Plant Contact) (530) 743-2756 Doug Lofton (General Manager) (530) 743-2043
Mailing Address	1280 Scales Street, Marysville, CA 95901
Type of Facility	Municipal Wastewater Treatment (Standard Industrial Classification: 4952)
Facility Design Flow	Existing Plant: 1.8 million gallons per day (average dry weather flow) New Plant: 5.0 million gallons per day (average dry weather flow)

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

A. **Background.** Linda County Water District (hereinafter Discharger) currently discharges under Waste Discharge Requirements Order No. 5-00-165 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079651. The Discharger submitted a Draft Report of Waste Discharge, dated 1 December 2004**,** a Supplement to the Draft Report of Waste Discharge on 13 May 2005, and a final Report of Waste Discharge, dated 31 May 2005, that applied for NPDES permit renewal to discharge up to the Design Flow Rate of 1.8 million gallons per day (mgd) of treated wastewater from the **existing** Linda County Water District Wastewater Treatment Plant (WWTP) and up to the Design Flow Rate of 5.0 mgd of treated wastewater from the not yet completed **new** Linda County Water District WWTP that will upgrade and replace the existing facility. The application was deemed complete on 1 June 2005.

B. **Facility Description**. The Discharger owns and operates a municipal wastewater treatment plant.

The **existing** treatment system consists of the headworks, primary clarification, a trickling filter, secondary clarification, disinfection and dechlorination, and sludge digesters. Treated wastewater is normally discharged to land using a series of seven percolation/evaporation ponds that lie within the Feather River floodplain. The Discharge point to the ponds is latitude 39º 5’ 41” N and longitude 121º 35’ 20” W. The pond berms have been overtopped during high river stages and the wastewater from the ponds has been discharged to the Feather River. The Discharger maintains a wastewater outfall pipeline at the discharge point latitude 39º 5’ 42” N and

longitude 121º 35' 32" W to the Feather River, a water of the United States and tributary to the Sacramento River within the Olivehurst Hydrologic Area of the Marysville Hydrologic Unit, in the Sacramento Hydrologic Basin.

Because of rapid residential growth in the community, additional wastewater treatment capacity is necessary. The Discharger has projected that a **new** treatment system will be completed mid-2008 and will involve expanding and upgrading existing facilities and construction of new facilities to provide a tertiary (or equivalent) level of treatment and year-round nitrification/denitrification. The existing pond system, which lies within the Feather River floodplain and when inundated constitutes a point discharge of waste, will be properly closed. The new treatment system is being designed to comply with priority pollutant water quality standards. The discharge point is in the area of the Feather River known as Shanghai Bend and Shanghai Falls, which is a well defined habitat for fish. The discharge of toxic substances at acutely or chronically toxic levels to aquatic life would impair the critical fishery. The Discharger has found no assimilative capacity for aquatic life-based pollutants of concern as identified by its own Reasonable Potential Analysis with respect to available sampling data, and therefore has not requested a mixing zone for aquatic life-based criteria at this time. If new information becomes available regarding assimilative capacity for aquatic life-based criteria, the Discharger requests the ability to work with Regional Board staff on a re-opener of the permit with respect to aquatic life-based mixing zones at that time. Mixing zones are being included in this Order, for longer-term human health-based criteria, that will not impact the critical fishery. The existing outfall pipeline, which was a single point discharge at the shoreline, has not been used for many years. For the new treatment system, an in-stream diffuser, designed to meet specific requirements for the mixing zones, will replace the shoreline discharge point.

Attachment B provides a topographic map of the facility and vicinity. Attachment C provides a flow schematic of the **existing** WWTP. There is no flow schematic yet for the **new** WWTP.

C. **Legal Authorities.** This Order is issued pursuant to Section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA Section 402.

D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. Attachment F, which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.

E. **California Environmental Quality Act (CEQA).** This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, *et seq*.) in accordance with Section 13389 of the CWC.

F. **Technology-Based Effluent Limitations**. The Code of Federal Regulations (CFR) at 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Secondary Treatment Standards at 40 CFR Part 133 for the **existing** WWTP **and** tertiary treatment or equivalent requirements that meet both the technology-based secondary treatment standards for POTWs and protect the beneficial uses of the receiving waters for the **new** WWTP. The Regional Water Board has considered the factors listed in CWC §13241 in establishing these requirements. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

Municipal wastewater is amenable to biological treatment. The biological component of a municipal treatment plant is termed secondary treatment. USEPA evaluated performance data from secondary treatment facilities and established performance standards. The existing WWTP includes biological treatment with a trickling filter and therefore, includes secondary treatment. Secondary Treatment Standards for both biochemical oxygen demand (BOD) and total suspended solids (TSS) are 30 mg/L as a 30-Day Average and 45 mg/L as a 7-Day Average, with an 85% removal rate. Technology–based Effluent Limitations for these constituents are included in this Order and are applied to the **existing** WWTP.

G. **Water Quality-Based Effluent Limitations.** Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA Section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)*." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment*."

The Feather River is listed as a WQLS for mercury, diazinon, unknown toxicity, and organochlorine pesticides in the 303(d) list of impaired water bodies. Additionally, the Regional Water Board recently completed a total maximum daily load (TMDL) for diazinon in the Sacramento and Feather Rivers and amended the Basin Plan to include diazinon waste load allocations and water quality objectives on 16 October 2003. The

Basin Plan now contains water quality objectives for diazinon of 0.080 µg/L as a one-hour average and 0.050 µg/L as a four-day average for the lower Feather River from the fish barrier dam to the Sacramento River. The Basin Plan also states that "[c]*ompliance with water quality objectives, waste load allocations, and load allocations for diazinon in the Sacramento and Feather Rivers is required by June 30, 2008*" and "[t]*he waste load allocations for all NPDES-permitted discharges are the diazinon water quality objectives*."

Effluent Limitations for diazinon, toxicity, and organochlorine pesticides are included in this Order.

This Order contains Effluent Limitations requiring a tertiary level of treatment, or equivalent, which is necessary to protect the beneficial uses of the receiving water. In accordance with California Water Code, Section 13241, a detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

H. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition,* for the Sacramento and San Joaquin River Basins (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve objectives for all waters addressed through the plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Beneficial uses applicable to the Feather River are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
EFF-001	Feather River	Existing: Municipal and domestic supply (MUN); agricultural irrigation (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD).
EFF-002	Groundwater	Existing: Municipal and domestic supply (MUN), industrial service supply (IND), industrial process supply (PROC), and agricultural supply (AGR).
	Feather River	Existing: Municipal and domestic supply (MUN); agricultural irrigation (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD).

The beneficial uses of the underlying ground water, as identified in the Basin Plan, are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

In addition, State Water Board Resolution No. 68-16 (hereafter Resolution 68-16) requires the Regional Water Board in regulating discharge of waste to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board's policies (*e.g.*, quality that exceeds water quality objectives). Resolution 68-16 requires that the discharge be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.

Requirements of this Order specifically implement the applicable *Water Quality Control Plans*.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on 22 December 1992, which was amended on 4 May 1995 and 9 November 1999, and the CTR on 18 May 2000, which was amended on 13 February 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

J. **State Implementation Policy.** On 2 March 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP*).* The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on 18 May 2000 with respect to the priority pollutant criteria promulgated by the USEPA though the California Toxics Rule. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005.

K. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under Section 5.3 of the SIP, a compliance schedule may not exceed five years from the date that the permit is issued or reissued, nor may it extend beyond ten years from the effective date of the SIP (or 18 May 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does include compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedules and interim

effluent limitations and/or discharge specifications is included in the Fact Sheet (Attachment F).

L. **Alaska Rule.** On 30 March 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, 27 April 2000). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after 30 May 2000 must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by 30 May 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the Federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on BOD_5 and TSS. Restrictions on BOD_5 and TSS are specified in federal regulations as discussed in Findings II.F, and the permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR §131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR §131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

N. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.

O. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and Federal Regulations at 40 CFR § 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations

may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

P. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

Q. **Standard and Special Provisions.** Standard Provisions, which in accordance with 40 CFR §§122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

R. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.

S. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.

B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provision I.A.7. [See Attachment D – Federal Standard Provisions] and Regional Water Board Standard Provision VI.A.2.g.

C. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.

D. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall and groundwater that are essentially free of pollutants.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Points EFF-001 and EFF-002

1. Final Effluent Limitations – Discharge Point EFF-001 and EFF-002

a. Upon commencement of discharge from the proposed diffuser at EFF-001 or 18 May 2010, whichever is sooner, the discharge of treated wastewater to the Feather River shall maintain compliance with the following effluent limitations at Discharge Point EFF-001, with compliance measured at Monitoring Location EFF-001 and EFF-002 as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter[1]	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Bis (2-ethylhexyl) Phthalate	µg/L	1.8	--	4.1	--	--
	lbs/day[2]	0.075	--	0.17	--	--
Chromium (VI), Total Recoverable	µg/L	8.1	--	16	--	--
	lbs/day[2]	0.34	--	0.68	--	--
Copper, Total Recoverable	µg/L	2.4	--	4.5	--	--
	lbs/day[2]	0.10	--	0.19	--	--
Cyanide, Total Recoverable	µg/L	4.3	--	8.5	--	--
	lbs/day[2]	0.18	--	0.36	--	--
Dibenzo(a,h)anthracene	µg/L	0.0044	--	0.0088	--	--
	lbs/day[2]	0.00018	--	0.00037	--	--
Dichlorobromomethane	µg/L	2.6	--	5.3	--	--
Lead, Total Recoverable	µg/L	0.43	--	1.2	--	--
	lbs/day[2]	0.018	--	0.052	--	--
Tetrachloroethene	µg/L	21	--	56	--	--
Zinc, Total Recoverable	µg/L	21	--	43	--	--
	lbs/day[2]	0.88	--	1.8	--	--

1. Monitoring of EFF-002 for compliance with the effluent limitations is required until the treatment/disposal ponds located within the Feather River levees are permanently closed.
2. Based upon a design treatment capacity of 5.0 mgd.

b. Upon commencement of discharge from the proposed diffuser at EFF-001 or 21 September 2011, whichever is sooner, the discharge of treated wastewater to the Feather River shall maintain compliance with the following effluent limitations at Discharge Point EFF-001, with compliance measured at Monitoring Location EFF-001 and EFF-002 as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter[1]	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand, 5-day @ 20°C	mg/L	10	15	20	--	--
	lbs/day[2]	420	630	830	--	--
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day[2]	420	630	830	--	--
Settleable Solids	m///	0.1	--	0.2	--	--
pH	standard units	--	--	--	6.5	8.0
Aluminum	µg/L	74	--	140	--	--
Chloroform	µg/L	26	--	--	--	--
	lbs/day[2]	1.1	--	--	--	--
Diazinon	µg/L	0.040	--	0.080	--	--
	lbs/day[2]	0.0017	--	0.0033	--	--
cis-1,2-Dichloroethene	µg/L	17	--	--	--	--
Iron, Total Recoverable	µg/L	300	--	--	--	--
Manganese, Total Recoverable	µg/L	50	--	--	--	--
Methoxychlor	µg/L	--	--	--	--	0.03
Methylene Blue Active Substances	mg/L	30	--	--	--	--
Nitrite (as N)	mg/L	1	--	--	--	--
	lbs/day[2]	40	--	--	--	--
Nitrite + Nitrate (as N)	mg/L	10	--	--	--	--
	lbs/day[2]	400	--	--	--	--
Oil and Grease	mg/L	10		15		
	lbs/day[2]	420		630		
Organochlorine Pesticides	µg/L	--	--	--	--	ND[3]
Thiobencarb	µg/L	2.6	--	--	--	--

1. Monitoring of EFF-002 for compliance with the effluent limitations is required until the treatment/disposal ponds located within the Feather River levees are permanently closed.
2. Based upon a design treatment capacity of 5.0 mgd.
3. The non-detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with the detection limits equal to or less than the lowest minimum level published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Plan or SIP), for the organochlorine pesticides listed in Appendix 4. For all other organochlorine pesticides, the Discharger shall use the lowest possible detectable level with a maximum acceptable detection level of 0.05 µg/L.

i. **Percent Removal**: The average monthly percent removal of BOD 5-day biochemical oxygen demand (BOD) 20°C and total suspended solids (TSS) shall not be less than 85 percent.

ii. **Electrical Conductivity**: The 30-day 90th percentile effluent electrical conductivity shall not exceed 780 µmhos/cm.

iii. **Total Residual Chlorine**: Effluent total residual chlorine shall not exceed the following:

a) 0.011 mg/L as a four-day average;
b) 0.46 lbs/day as a four-day average;
c) 0.019 mg/L as a one-hour average; and
d) 0.79 lbs/day as a one-hour average.

iv. **Total Ammonia**: Effluent total ammonia (as N) shall not exceed the following from 1 April through 31 October:

a) 1.22 mg/L as a monthly average;
b) 50.9 lbs/day as a monthly average;
c) 5.62 mg/L as a one-hour average; and
d) 234 lbs/day as a one-hour average.

Total Ammonia: Effluent total ammonia (as N) shall not exceed the following from 1 November through 31 March:

e) 1.80 mg/L as a monthly average;
f) 75.1 lbs/day as a monthly average;
g) 5.62 mg/L as a one-hour average; and
h) 234 lbs/day as a one-hour average.

v. **Turbidity**: Effluent turbidity shall not exceed the following:

a) 2 NTU as a daily average;
b) 5 NTU more than 5 percent of the time within a 24-hour period; and
c) 10 NTU at any time.

vi. **Total Coliform Organisms**: Effluent total coliform organisms concentrations shall not exceed the following:

a) 2.2 MPN/100 m/ as a seven-day median;
b) 23 MPN/100 m/ more than once in any 30-day period; and
c) 240 MPN/100 m/ at any time.

vii. **Mercury**: The total monthly mass discharge of total mercury shall not exceed 0.016 pounds/month.

viii. **Acute Toxicity**: Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay - - - - - - - - - 70%
Median for any three or more consecutive bioassays - - - - 90%

c. **Average Dry Weather Discharge Flow**: **Prior to complying with Provision C.2.a**, the average dry weather discharge flow shall not exceed 1.8 million gallons per day. **Upon compliance with Provision C.2.a**, the average dry weather discharge flow shall not exceed 5.0 million gallons per day.

2. **Interim Effluent Limitations– Discharge Point EFF-002**

a. During the period beginning **upon the effective date of this Order** and ending **upon commencement of discharge from the proposed diffuser at EFF-001 or 18 May 2010, whichever is sooner**, the discharge of treated wastewater shall maintain compliance with the following priority pollutant limitations at EFF-002, with compliance measured at Monitoring Location EFF-002 as described in the attached Monitoring and Reporting Program (Attachment E). These interim priority pollutant effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Bis (2-ethylhexyl) Phthalate	µg/L	84	--	190	--	--
	lbs/day[1]	1.3	--	2.9	--	--
Chromium (VI), Total Recoverable	µg/L	60	--	120	--	--
	lbs/day[1]	0.91	--	1.8	--	--
Copper, Total Recoverable	µg/L	44	--	84	--	--
	lbs/day[1]	0.67	--	1.3	--	--
Cyanide, Total Recoverable	µg/L	97	--	200	--	--
	lbs/day[1]	1.5	--	2.9	--	--
Dibenzo(a,h)anthracene	µg/L	0.37	--	0.73	--	--
	lbs/day[1]	0.0055	--	0.011	--	--
Dichlorobromomethane	µg/L	2.6	--	5.3	--	--
Lead, Total Recoverable	µg/L	6.8	--	20	--	--
	lbs/day[1]	0.10	--	0.30	--	--
Tetrachloroethene	µg/L	21	--	56	--	--
Zinc, Total Recoverable	µg/L	240	--	490	--	--
	lbs/day[1]	3.6	--	7.4	--	--

1. Based upon a design treatment capacity of 1.8 mgd.

b. During the period beginning **upon the effective date of this Order** and ending **upon commencement of discharge from the proposed diffuser at EFF-001 or 21 September 2011, whichever is sooner**, the discharge of treated wastewater shall maintain compliance with the following limitations at EFF-002, with compliance measured at Monitoring Location EFF-002 as described in the attached Monitoring and Reporting Program (Attachment E). These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand, 5-day @ 20°C	mg/L	45	65	--	--	--
	lbs/day[1]	680	980	--	--	--
Total Suspended Solids	mg/L	45	65	--	--	--
	lbs/day[1]	680	980	--	--	--
Settleable Solids	m///	0.1	--	0.2	--	--
pH	standard units	--	--	--	6.5	8.0
Aluminum	µg/L	74	--	140	--	--
Chloroform	µg/L	26	--	--	--	--
	lbs/day[1]	0.38	--	--	--	--
Diazinon	µg/L	0.040	--	0.080	--	--
	lbs/day[1]	0.00060	--	0.0012	--	--
cis-1,2-Dichloroethene	µg/L	17	--	--	--	--
Iron, Total Recoverable	µg/L	300	--	--	--	--
Manganese, Total Recoverable	µg/L	50	--	--	--	--
Methoxychlor	µg/L	--	--	--	--	0.03
Methylene Blue Active Substances	mg/L	30	--	--	--	--
Nitrite (as N)	mg/L	60	--	--	--	--
	lbs/day[1]	900	--	--	--	--
Nitrite + Nitrate (as N)	mg/L	60	--	--	--	--
	lbs/day[1]	900	--	--	--	--
Organochlorine Pesticides[2]	µg/L	--	--	--	--	ND[2]
Thiobencarb	µg/L	2.6	--	--	--	--

1. Based upon a design treatment capacity of 1.8 mgd.
2. The non-detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with detection limits equal to or less than the lowest minimum level published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Plan or SIP), for the organochlorine pesticides listed in Appendix 4. For all other organochlorine pesticides, the Discharger shall use the lowest possible detectable level with a maximum acceptable detection level of 0.05 µg/L.

i. **Percent Removal**: The average monthly percent removal of BOD 5-day 20°C and TSS shall not be less than 65 percent.

ii. **Electrical Conductivity**: The 30-day 90th percentile effluent electrical conductivity shall not exceed 780 µmhos/cm.

iii. **Total Residual Chlorine**: Effluent total residual chlorine shall not exceed the following:

a) 0.011 mg/L as a four-day average;
b) 0.17 lbs/day as a four-day average;
c) 0.019 mg/L as a one-hour average; and
d) 0.29 lbs/day as a one-hour average.

iv. **Total Ammonia**: Effluent total ammonia (as N) shall not exceed the following from 1 April through 31 October:

a) 1.22 mg/L as a monthly average;
b) 18.3 lbs/day as a monthly average;
c) 5.62 mg/L as a one-hour average; and
d) 84.4 lbs/day as a one-hour average.

Total Ammonia: Effluent total ammonia (as N) shall not exceed the following from 1 November through 31 March:

e) 1.80 mg/L as a monthly average;
f) 27.0 lbs/day as a monthly average;
g) 5.62 mg/L as a one-hour average; and
h) 84.4 lbs/day as a one-hour average.

v. **Total Coliform Organisms**: Effluent total coliform organisms concentrations shall not exceed the following:

a) 240 MPN/100 m/ as a 30-day median; and
b) 500 MPN/100 m/ at any time.

vi. **Mercury**: The total monthly mass discharge of total mercury shall not exceed 0.016 pounds/month.

vii. **Acute Toxicity**: Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay - - - - - - - - - 70%
Median for any three or more consecutive bioassays - - - - 90%

B. **Land Discharge Specifications – Discharge Point EFF-002**

1. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas.

2. As a means of discerning compliance with Land Discharge Specification No. 1, the dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/L.

3. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

   a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

   b. Weeds shall be minimized.

   c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

4. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

5. Ponds shall have a minimum of two feet of freeboard and sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration except for ponds located within the Feather River levees when inundated with River water.

   Pond freeboard shall never be less than two feet (measured vertically to the lowest, non-spillway point of overflow), except for ponds located within the Feather River levees when inundated with River water.

6. Wastewater shall not be discharged from the ponds except for ponds located within the Feather River levees when inundated with River water.

7. All wastewater discharged into the ponds shall be at least of disinfected secondary quality.

C. **Reclamation Specifications**

1. All uses of reclaimed water shall be in accordance with a Master Reclamation Permit issued in accordance with CCR Title 22 and the California Water Code.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in the Feather River:

1. **Fecal Coliform**. The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than ten percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.

2. **Biostimulatory Substances**. Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

3. **Chemical Constituents**. Chemical constituents to be present in concentrations that adversely affect beneficial uses. At a minimum, the discharge shall not cause the Feather River to contain lead in excess of 15 µg/L.

4. **Discoloration**. Discoloration that causes nuisance or adversely affects beneficial uses.

5. **Dissolved Oxygen**:

    a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;

    b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor

    c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.

6. **Floating Material**. Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

7. **Oils and Greases**. Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

8. **pH**. The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units. A one-month averaging period may be applied when calculating the pH change of 0.5 units.

9. **Pesticides**:

    a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;

    b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;

    c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer;

    d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.);

    e. Pesticide concentrations to exceed the lowest levels technically and economically achievable; nor

    f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

10. **Radioactivity**:

    a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

    b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

11. **Suspended Sediments**. The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

12. **Settleable Substances**. Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

13. **Suspended Material**. Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

14. **Taste- or Odor-Producing Substances**. Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

15. **Temperature**. The natural temperature to be increased by more than 5°F.

16. **Toxic Substances**. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

17. **Turbidity**. The turbidity to increase as follows:

    a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs;

    b. More than 20 percent where natural turbidity is between 5 and 50 NTUs;

    c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor

    d. More than 10 percent where natural turbidity is greater than 100 NTUs.

    When wastewater is treated to a tertiary level (including coagulation) or equivalent, a one-month averaging period may be used when determining compliance with Surface Water Limitation V.A.17.

B. **Groundwater Limitations**

1. The discharge shall not cause the groundwater to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

2. Release of waste constituents from any storage, treatment, or disposal component associated with the WWTP shall not, in combination with other sources of the waste constituents, cause groundwater within influence of the WWTP to contain waste constituents in concentrations in excess of natural background quality or that listed below, whichever is greater:

    a. Total coliform organisms median of 2.2 MPN/100 m/ over any seven-day period.

    b. Chemical constituents in concentrations that adversely affect beneficial uses, including:

        i. Constituent concentrations listed below:

Constituent	Units	Limitation
Electrical Conductivity	µmhos/cm	700
Total Dissolved Solids[1]	mg/L	450
Nitrate + Nitrite (as N)	mg/L	10

[1] A cumulative constituent comprised of dissolved matter consisting mainly of inorganic salts, small amounts of organic matter, and dissolved gases (***e.g.***, ammonia, bicarbonate alkalinity, boron, calcium, chloride, copper, iron, magnesium, manganese, nitrate, phosphorus, potassium, sodium, silica, sulfate, total alkalinity).

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions**. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

   The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, Sections 13385, 13386, and 13387.

2. **Regional Water Board Standard Provisions**. The Discharger shall comply with the following provisions:

   a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by the California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 26.

   b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

      i. Violation of any term or condition contained in this Order;

      ii. Obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

      iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

      iv. A material change in the character, location, or volume of discharge.

      The causes for modification include:

      I. <u>New regulations</u>. New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

      II. <u>Land application plans</u>. When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

      III. <u>Change in sludge use or disposal practice</u>. Under 40 Code of Federal Regulations (CFR) §122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

   The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, **even if this Order has not yet been modified**.

d. If more stringent applicable water quality standards are approved, pursuant to Section 303 of the CWA, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

e. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

   i. Contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

   ii. Controls any pollutant limited in the Order.

   The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

f. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

g. By-pass (the intentional diversion of waste streams from any portion of a treatment facility or collection system, except those portions designed to meet variable effluent limits) is prohibited except under the following conditions:

   i. By-pass is required for essential maintenance to assure efficient operation;

      and

   ii. Neither effluent nor receiving water limitations are exceeded;

      and

   iii. The Discharger notifies the Regional Water Board ten days in advance.

h. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

i. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

j. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.

k. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

l. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the CWC, Section 13050.

m. Safeguard to electric power failure:

    i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.

    ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.

    iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

n. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup)

plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.l.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks, and pipes should be considered;

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational; and

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

o. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by **31 January**. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.

p. The Discharger shall submit technical reports as directed by the Executive Officer.

q. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to

procedures approved by the Regional Water Board.

Unless otherwise specified, all metals shall be reported as Total Recoverable Metals.

Unless otherwise specified, bioassays shall be performed in the following manner:

i. Acute bioassays shall be performed in accordance with guidelines approved by the Regional Water Board and the Department of Fish and Game or in accordance with methods described in USEPA's manual for measuring acute toxicity of effluents (EPA-821-R-02-012 and subsequent amendments).

ii. Short-term chronic bioassays shall be performed in accordance with USEPA guidelines (EPA-821-R-02-013 and subsequent amendments).

r. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.

s. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.

t. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

u. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.

v. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.

w. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

x. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report to the Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

B. Monitoring and Reporting Program Requirements

1. The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

2. By **1 December 2006**, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, adopted 2 March 2000 by the State Water Resources Control Board. All peaks identified by analytical methods shall be reported.

3. This permit, and the Monitoring and Reporting Program which is a part of this permit, requires that certain parameters be monitored on a continuous basis. The wastewater treatment plant is not staffed on a full time basis. Permit violations or system upsets can go undetected during this period. The Discharger is required to establish an electronic system for operator notification for continuous recording device alarms. For existing continuous monitoring systems, the electronic notification system shall be installed **within six months of adoption** of this permit. For systems installed following permit adoption, the notification system shall be installed simultaneously.

C. Special Provisions

1. Reopener Provisions

a. Upon adoption of any applicable water quality standard for receiving waters by the Regional Water Board or the State Water Board pursuant to the CWA and regulations adopted thereunder, this permit may be reopened and receiving water limitations added.

b. If new information becomes available regarding aquatic life-based or human health-based criteria, this permit may be reopened to reconsider mixing zones for those criteria at that time.

c. Upon the Regional Water Board's redistribution of EC allocation for discharges to the Feather River, this permit may be reopened and the EC limitation revised.

d. If after review of one year of monitoring results it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective for oil and grease, this Order may be reopened and interim effluent limitations added for oil and grease.

2. **Special Studies, Technical Reports and Additional Monitoring Requirements**

   a. **WWTP Expansion.** For authorization to discharge in excess of 1.8 mgd and up to 5 mgd, the Discharger must:

      i. Submit certification from a California-registered civil engineer with experience in the design and operation of wastewater treatment plants that the WWTP is capable of achieving full compliance with final discharge limitations and has adequate capacity to treat and dispose of these flows in compliance with this Order.

      ii. Show that California Environmental Quality Act requirements have been satisfied for the WWTF expansion project.

      Satisfaction of this provision is subject to written Executive Officer approval.

   b. **Mixing Zone.** 60 days prior to discharge to the Feather River, the Discharger must submit a technical report that demonstrates that the discharge will be completely mixed within 600 feet of the discharge point.

   c. **Hydrogeologic Evaluation and Groundwater Monitoring Tasks**. Discharger self-monitoring reports for groundwater monitoring shall present, for each monitoring event, determinations for the direction and gradient of groundwater flow. The groundwater monitoring network shall include one or more background monitoring wells and a sufficient number of designated monitoring wells to evaluate performance of best practicable treatment or control measures and compliance with this Order's groundwater limitations. All wells shall comply with appropriate standards as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981), and any more stringent standards adopted by the Discharger or county pursuant to CWC Section 13801. The existing well network will be evaluated, and the proposed network should include existing monitoring wells where they will serve to measure compliance or provide other relevant information (*e.g.*, depth to groundwater) and recommend their destruction if they will no longer serve a useful purpose. The Discharger shall install approved monitoring wells, properly destroy ineffective wells (as necessary) and monitor groundwater in accordance with this Order's Monitoring and Reporting Program. This Order may be reopened and additional groundwater limitations added.

   d. The Discharger shall conduct the chronic toxicity testing specified in the Monitoring and Reporting Program. If the testing indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the narrative water quality objective for toxicity, the Discharger shall initiate a Toxicity Identification Evaluation (TIE) to identify the causes of toxicity. Upon completion of the TIE, the Discharger shall submit a workplan to conduct a Toxicity Reduction Evaluation (TRE) and, after Regional Water Board evaluation, conduct the TRE. This Order may be reopened and a chronic toxicity limitation included and/or a limitation for the specific toxicant identified in the TRE

included. Additionally, if a chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened and a limitation based on that objective included.

e. The Discharger's service area is experiencing growth. As growth continues, limited portions of the wastewater collection system may be outside the service area of the Discharger. In order to assure compliance with Discharge Prohibitions against overflows and bypasses, and to assure protection of the entire collection system and treatment works from industrial discharges, it is necessary that the Discharger control discharges into the system. To control bypasses and discharges into the entire collection system, the Discharger shall establish interagency agreements with the collection system users. The interagency agreements shall contain, at a minimum, requirements for reporting of unauthorized releases of wastewater, maintenance of the collection system, backup power and/or adequate wet well capacity at all pump stations to prevent overflows during power outages and pump failures, and pump station high water alarm notification systems. The agreements shall also require implementation of an industrial pretreatment program that meets the minimum requirements of this permit. The Discharger shall comply with the following time schedule:

Task	Compliance Date
Submit interagency agreements	**30 days prior to connection**

The Discharger shall submit to the Regional Water Board on or before the compliance date, the specified documents or a written report detailing compliance or noncompliance with the compliance date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule.

f. At least 60 days prior to discharge to the Feather River, the Discharger shall submit to the Regional Water Board a list of proposed Feather River monitoring locations. The monitoring locations shall include at least one location 100 feet upstream and one location 600 feet downstream of the discharge via diffuser at EFF-001 for monitoring of all of the surface receiving water constituents in accordance with the MRP Receiving Water Monitoring Requirements VIIIA.1. The monitoring locations shall include at least two additional locations along the edge of each mixing zone for monitoring of constituents for which assimilative capacity has been granted (i.e., electrical conductivity, chloroform, cis-1,2-dichloroethene, dichlorobromomethane, MBAS, tetrachloroethene, and thiobencarb) in accordance with the MRP Receiving Water Monitoring Requirments VIIIA.2. Upon approval of the locations by the Executive Officer, these locations shall represent R-002 and R-004 as defined in the MRP.

g. **Salinity Reduction Study**. The Discharger shall submit to the Regional Water Board for approval by the Executive Officer, a work plan, including a time schedule for a comprehensive technical evaluation of the Facility's waste

treatment and control of salinity and to determine BPTC of its discharge to the Feather River and to meet the requirements of State Water Board Resolution No. 68-16. The technical report describing the work plan and schedule shall contain a preliminary evaluation and propose a time schedule for completing the comprehensive technical evaluation. To comply with Resolution No. 68-16, the treatment or control of discharges of waste to waters of the State must be sufficient to provide the minimum degradation of such waters that is feasible and consistent with the maximum benefit to the people of the State, but in no case can the discharge cause the exceedance of applicable water quality objectives.

Following completion of the evaluation, the Discharger shall submit to the Regional Water Board a technical report describing the evaluation's results and critiquing the treatment facility with respect to BPTC. Where deficiencies are documented, the technical report shall provide recommendations for necessary modifications (e.g., new or revised salinity source control measures) to achieve BPTC and identify the source(s) of funding and proposed schedule for modifications. The schedule shall be as short as practicable. The technical report shall include specific methods the Discharger proposes as a means to measure processes and assure continuous optimal performance of BPTC measures. The Discharger shall comply with the following compliance schedule in implementing the work required by this Provision:

Task	Compliance Date
1. Submit work plan and schedule for comprehensive evaluation	**1 February 2007**
2. Submit technical report describing comprehensive evaluation results	**1 November 2007**
3. Implement measures to reduce salinity, as necessary	**1 November 2008**

h. By **1 year after permit adoption**, the Discharger shall submit a pond closure plan for the ponds located within the Feather River levees. The pond closure plan shall include a description of the removal and disposal of the sludge accumulated in the ponds.

i. The Discharger shall complete an annual monitoring study of the treatment/disposal ponds located within the Feather River levees until the ponds are permanently closed. The monitoring shall be sufficient to determine if the discharge from the ponds causes exceedance of any narrative or numerical water quality objective contained in the Basin Plan including bacteria, biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, pH, pesticides, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity and any Effluent or Receiving Water Limitation contained in this Order. A receiving water mixing zone has not been approved for the pond discharge, therefore, if the Discharger does not have access to the ponds during flood stages, pond monitoring prior to inundation may be conducted during the month of October.

The report shall contain the results of the compliance sampling of the discharge from the ponds.

Task	Compliance Date	Report Due Date
Conduct sampling	**1 November - annually**	
Submit Study Results		**15 January - annually**

3. **Best Management Practices and Pollution Prevention—NA**

4. **Compliance Schedules**

   a. The Discharger shall comply with the following time schedule to assure compliance with Effluent Limitations contained in Effluent Limitations IV.A.1 of this Order:

Task	Compliance Date	Report Due Date
Submit Annual Status Report		**15 January, annually**
Submit Workplan/Time Schedule		**15 January 2007**
Full Compliance with CTR limits	**18 May 2010**	
Full Compliance	**21 September 2011**	

   The Discharger shall submit to the Regional Water Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule.

   b. **Bis (2-ethylhexyl) phthalate, Chromium (VI), Copper, Cyanide, Dibenzo(a,h)anthracene, Dichlorobromomethane, Lead, Tetrachloroethene, and Zinc Compliance Schedule**: This Order contains Effluent Limitations based on water quality criteria contained in the CTR for bis (2-ethylhexyl) phthalate, chromium (VI), copper, cyanide, dibenzo(a,h)anthracene, dichlorobromomethane, lead, tetrachloroethene, and zinc. The new final water quality based effluent limitations for bis (2-ethylhexyl) phthalate, chromium (VI), copper, cyanide, dibenzo(a,h)anthracene, dichlorobromomethane, lead, tetrachloroethene, and zinc required by this Order shall become effective on **18 May 2010**. As this compliance schedule is greater than one year, the Discharger shall submit semi-annual progress reports on **15 January** and **15 July** of each year until the Discharger achieves compliance with the final water quality based effluent limitations for bis (2-ethylhexyl) phthalate, chromium (VI), copper, cyanide, dibenzo(a,h)anthracene, dichlorobromomethane, lead, tetrachloroethene, and zinc.

c. **Groundwater Monitoring Tasks.** The Discharger shall continue to monitor groundwater in existing monitoring wells in accordance with the MRP unless and until individual existing wells are removed from the approved network and properly closed.

5. **Construction, Operation and Maintenance Specifications**

a. With the exception of ponds located within the Feather River levees, the treatment, storage, and disposal facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

b. This permit, and the Monitoring and Reporting Program which is a part of this permit, requires that certain parameters be monitored on a continuous basis. The wastewater treatment plant is not staffed on a full time basis. Permit violations or system upsets can go undetected during this period. The Discharger is required to establish an electronic system for operator notification for continuous recording device alarms. For existing continuous monitoring systems, the electronic notification system shall be installed **within six months of adoption** of this permit. For systems installed following permit adoption, the notification system shall be installed simultaneously.

6. **Special Provisions for Municipal Facilities (POTWs Only)**

a. **Collection System.**

On May 2, 2006, the State Water Board adopted State Water Board Order 2006-0003, a Statewide General WDR for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order 2006-0003 and any future revisions thereto. Order 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR. Therefore, **by November 2, 2006,** the Discharger shall apply for coverage under State Water Board Order 2006-0003 for operation of its wastewater collection system. **OR** The Discharger has applied for and has been approved for coverage under State Water Board Order 2006-0003 for operation of its wastewater collection system.

Regardless of the coverage obtained under Order 2006-0003, the Discharger's collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system [40 CFR section 122.41(e)], report any non-compliance [40 CFR section 122.41(l)(6) and (7)], and mitigate any discharge from the collection system in violation of this Order [40 CFR. section 122.41(d)].

b. **Sludge Disposal Requirements**.

i. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and

consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste,* as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, *et seq*.

ii. Any proposed change in sludge use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least **90 days** in advance of the change.

iii. Use and disposal of sewage sludge shall comply with existing federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR Part 503.

If the State Water Resources Control Board and the Regional Water Quality Control Boards are given the authority to implement regulations contained in 40 CFR Part 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR Part 503 whether or not they have been incorporated into this Order.

iv. The Discharger is encouraged to comply with the "Manual of Good Practice for Agricultural Land Application of Biosolids" developed by the California Water Environment Association.

v. **By 1 December 2006**, the Discharger shall submit a sludge disposal plan describing the annual volume of sludge generated by the plant and specifying the disposal practices.

c. Pretreatment Requirements

i. **Within six months of the wastewater treatment plant being rated as having 5 mgd of capacity,** the Discharger shall submit for Regional Water Board approval an Industrial Pretreatment Program, as more completely set forth in 40 CFR Part 403, the legal authorities, programs, and controls necessary to ensure that industrial discharges do not introduce pollutants into the sewerage system that, either alone or in conjunction discharges from other sources. The Discharger shall not allow industrial discharges into the system that:

a) Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or

b) Inhibit or disrupt treatment processes, treatment system operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.

ii. The Discharger shall enforce the Pretreatment Standards promulgated under Sections 307(b), 307(c) and 307(d) of the Clean Water Act. The Discharger shall perform the pretreatment functions required by 40 CFR Part 403

including but not limited to:

a) Adopting the legal authority required by 40 CFR §403.8(f)(1);

b) Enforcing the Pretreatment Standards of 40 CFR §403.5 and §403.6;

c) Implementing procedures to ensure compliance as required by 40 CFR §403.8(f)(2); and

d) Providing funding and personnel for implementation and enforcement of the pretreatment program as required by 40 CFR §403.8(f)(3).

iii. The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this permit. If the Discharger fails to perform the pretreatment functions, the Regional Water Quality Control Board (Regional Water Board), the State Water Resources Control Board (State Water Board) or the U.S. Environmental Protection Agency (USEPA) may take enforcement actions against the Discharger as authorized by the Clean Water Act. The Discharger shall implement, as more completely set forth in 40 CFR §403.5, the necessary legal authorities, programs, and controls to ensure that incompatible wastes are not introduced to the treatment system.

iv. The Discharger shall implement, as more completely set forth in 40 CFR §403.5, the necessary legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:

a) Wastes which create a fire or explosion hazard in the treatment works;

b) Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0, unless the works is specially designed to accommodate such wastes;

c) Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works;

d) Any waste, including oxygen demanding pollutants (BOD, *etc*.), released in such volume or strength as to cause inhibition or disruption in the treatment works, and subsequent treatment process upset and loss of treatment efficiency;

e) Heat in amounts that inhibit or disrupt biological activity in the treatment works, or that raise influent temperatures above 40°C (104°F), unless the Regional Water Board approves alternate temperature limits;

f) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

g) Pollutants which result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems; and

h) Any trucked or hauled pollutants, except at points predesignated by the Discharger.

v. The Discharger shall implement, as more completely set forth in 40 CFR §403.5, the legal authorities, programs, and controls necessary to ensure that indirect discharges do not introduce pollutants into the sewerage system that, either alone or in conjunction with a discharge or discharges from other sources:

a) Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or

b) Inhibit or disrupt treatment processes, treatment system operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.

vi. The Discharger shall be responsible for the performance of all pretreatment requirements contained in 40 CFR Part 403 and shall be subject to enforcement actions, penalties, fines, and other remedies by the Environmental Protection Agency (USEPA), or other appropriate parties, as provided in the Clean Water Act, as amended (33 USC 1351, ***et. seq***.) (hereafter Act).

The Discharger shall implement and enforce its Approved publicly owned treatment works (POTW) Pretreatment Program. The Discharger's Approved POTW Pretreatment Program is hereby made an enforceable condition of this permit. USEPA may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the Act.

The Discharger shall enforce the requirements promulgated under Sections 307(b), (c), and (d) and Section 402(b) of the Act. The Discharger shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.

The Discharger shall perform the pretreatment functions as required in 40 CFR Part 403 including, but not limited to:

a) Implement the necessary legal authorities as provided in 40 CFR §403.8(f)(1).

b) Enforce the pretreatment requirements under 40 CFR §403.5 and §403.6.

c) Implement the programmatic functions as provided in 40 CFR §403.8(f)(2), in particular, the publishing of a list of significant violators.

d) Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR §403.8(f)(3).

d. **Collection System Requirements**

i. The Discharger shall maintain all portions of the wastewater collection system to assure compliance with this Order. Collection system, or sanitary sewer overflows (SSOs) and/or discharges are prohibited by this Order. All violations of this Order must be reported as specified in Standard Provisions and the public shall be notified, in coordination with the Health Department, in areas that have been contaminated with sewage. All parties with a reasonable potential for exposure to a sewage overflow shall be notified. The Regional Water Board shall be notified as soon as is reasonably possible, but no later than 24 hours, following an SSO.

ii. Upon reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow, the discharger shall, to the extent necessary to maintain compliance with this Order, take any necessary remedial action to (1) control or limit the volume of sewage discharged, (2) terminate the sewage discharge as rapidly as possible, and (3) recover as much of the sewage discharged as possible for proper disposal, including any wash down water. The dischargers shall implement all remedial actions to the extent they may be applicable to the discharge.

7. **Other Special Provisions**

a. After **21 September 2011** or completion of the new WWTP, wastewater shall be oxidized, coagulated, filtered, and disinfected, or equivalent treatment provided.

b. After **21 September 2011** discharge of wastewater to treatment/disposal ponds located within the Feather River levees is prohibited.

c. The Discharger shall use the best practicable treatment or control technique currently available to limit mineralization to no more than a reasonable increment.

d. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

e. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (916) 464-3291 (or to the Regional Water Board staff engineer assigned to the facility) within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Federal Standard Provision V.E.1 [*40 CFR §122.41(l)(6)(i)*].

f. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in the Federal Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, ***etc***.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.

g. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

h. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

   To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Federal Standard

Provision V.B.5 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. **Total Mercury Mass Loading Effluent Limitations.**

The procedures for calculating mass loadings are as follows:

1. The total pollutant mass load for each individual calendar month shall be determined using an average of all concentration data collected that month and the corresponding total monthly flow. All monitoring data collected under the monitoring and reporting program, pretreatment program and any special studies shall be used for these calculations.

2. In calculating compliance, the Discharger shall count all non-detect measures at one-half of the detection level. If compliance with the effluent limitation is not attained due to the non-detect contribution, the Discharger shall improve and implement available analytical capabilities and compliance shall be evaluated with consideration of the detection limits.

B. **Average Dry Weather Discharge Flow Effluent Limitation**.

Compliance with the Average Dry Weather Discharge Flow effluent limitations will be measured at times when groundwater is at or near normal and runoff is not occurring.

C. **Mass Effluent Limitations.**

The mass effluent limitations contained in Final Effluent Limitations IV.A.1.a. and IV.A.1.b. and Interim Effluent Limitations IV.A.2.a. and IV.A.2.b. are based on a design average dry weather flow (ADWF) of 5.0 million gallons per day (mgd) and 1.8 mgd, respectively, and calculated as follows:

Mass (lbs/day) = Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor)

During wet-weather storm events when the effluent flow exceeds the design ADWF, compliance with the mass effluent limitations contained in the tables in Final Effluent Limitations IV.A.1.a. and IV.A.1.b. and the tables in Interim Effluent Limitations IV.A.2.a. and IV.A.2.b. will be determined on the mass loading that is in proportion to the discharge flow.

ATTACHMENT A – DEFINITIONS

Average Dry Weather Flow (ADWF): the daily average flow when groundwater is at or near normal and runoff is not occurring.

Average Four-Day Effluent Limitation: the highest allowable average of daily discharges over a four-day period, calculated as the sum of all daily discharges measured during a four-day period divided by the number of daily discharges measured during that four-day period.

Average Hourly Effluent Limitation: the highest allowable average of discharges over a one-hour period, calculated as the sum of all discharges measured during that one-hour period divided by the number of discharges measured during that one-hour period.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (*e.g.*, concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if one day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (*i.e.*, each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

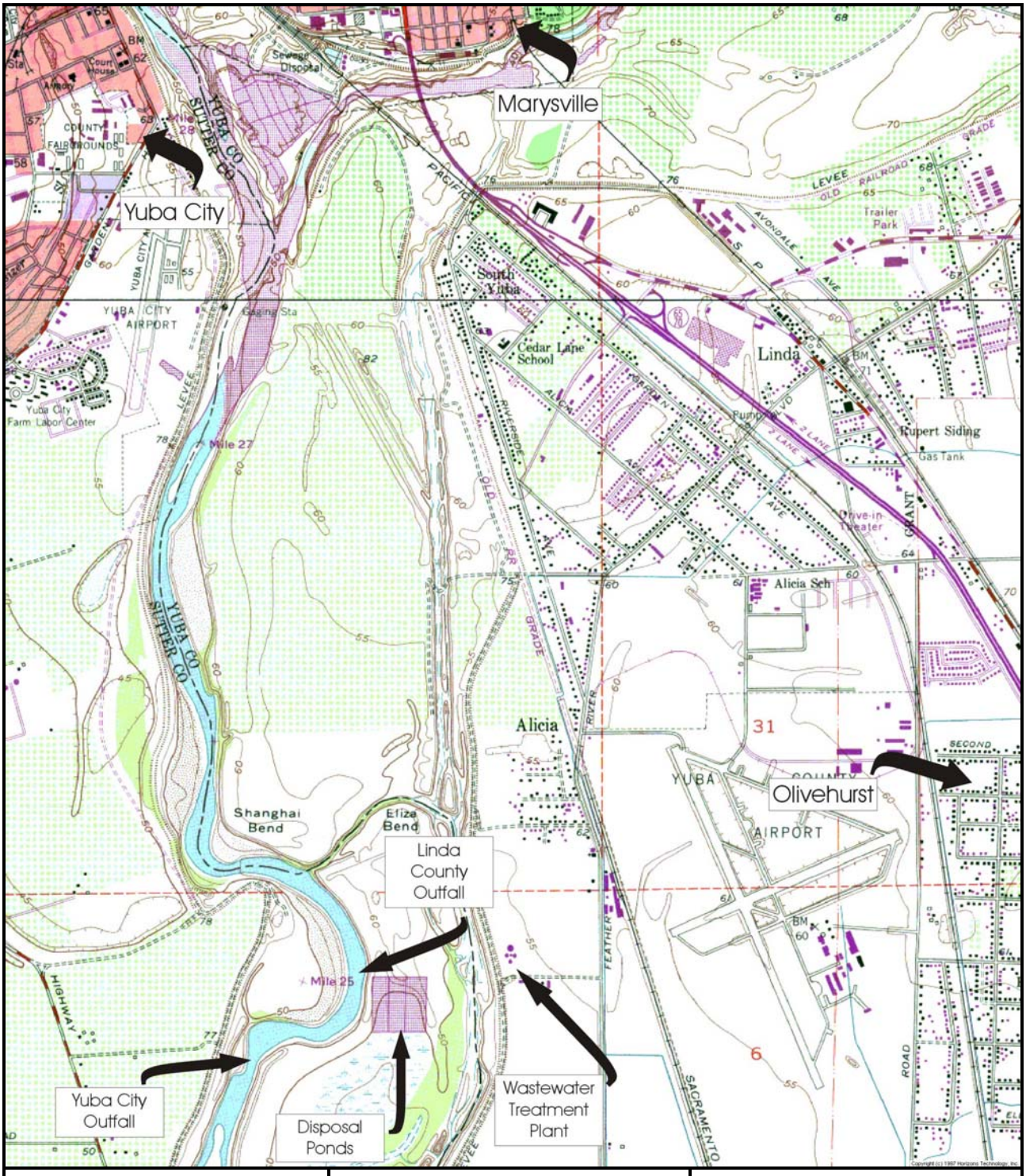
Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (*i.e.*, each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

Percent Removal: the arithmetic mean of 20°C BOD (5-day) and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85 percent removal).

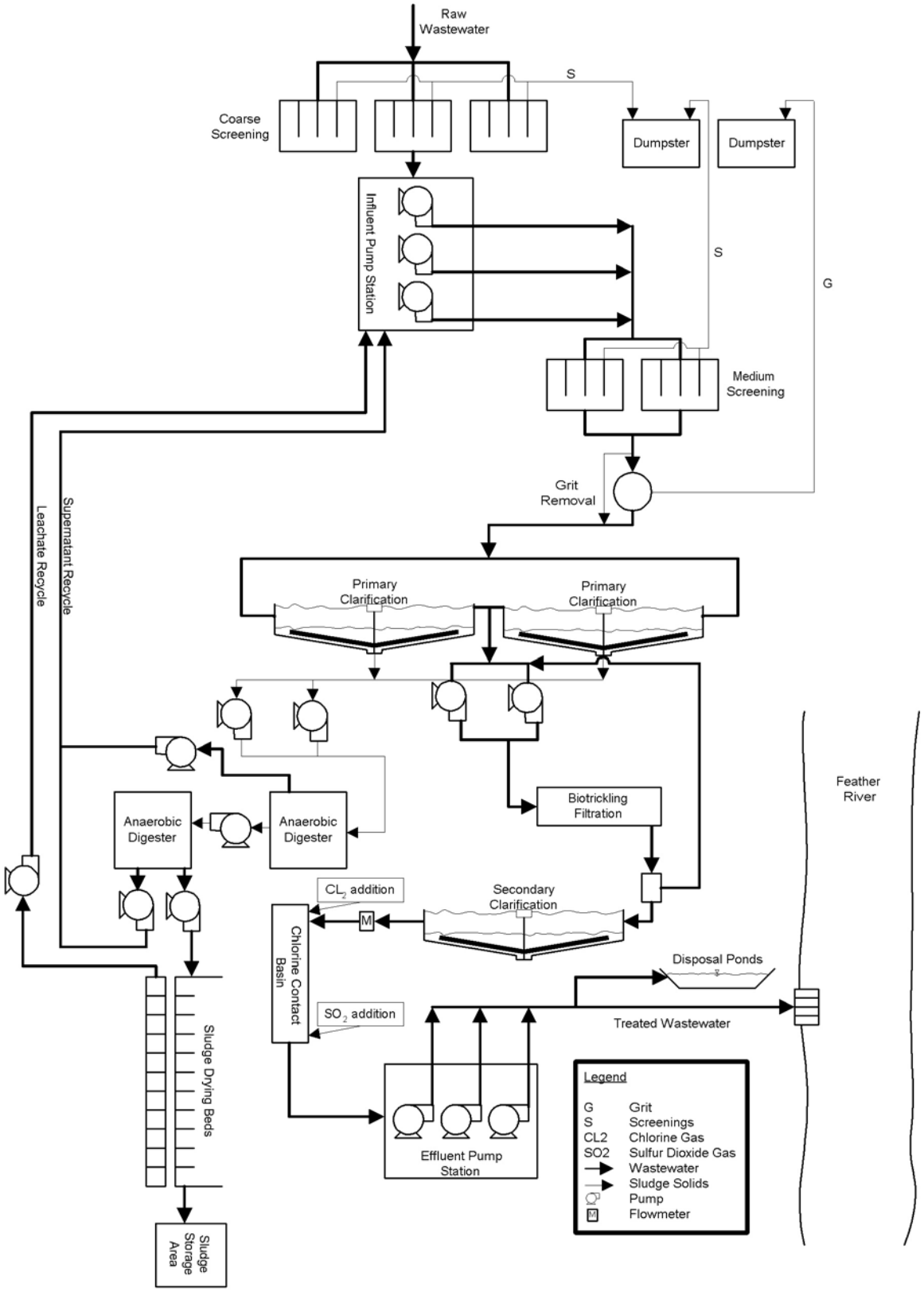
Six-month Median Effluent Limitation: NA

ATTACHMENT B – TOPOGRAPHIC MAP



Attachment B North	Linda County Water District Wastewater Treatment Plant Yuba County and Sutter County Section 1, T14N, R3E, MDB&M	Olivehurst USGS Quadrangle 7.5 Minute Series Scale: 1 inch = 4000 feet

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [*40 CFR §122.41(a)*].

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [*40 CFR §122.41(a)(1)*].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [*40 CFR §122.41(c)*].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [*40 CFR §122.41(d)*].

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [*40 CFR §122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*40 CFR §122.41(g)*].

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [*40 CFR §122.5(c)*].

F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [*40 CFR §122.41(i)*] [*CWC 13383(c)*]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [*40 CFR §122.41(i)(1)*];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [*40 CFR §122.41(i)(2)*];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [*40 CFR §122.41(i)(3)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [*40 CFR §122.41(i)(4)*].

G. Bypass

1. Definitions

   a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility [*40 CFR §122.41(m)(1)(i)*].

   b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [*40 CFR §122.41(m)(1)(ii)*].

2. Bypass not exceeding limitations – The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3 and I.G.5 below [*40 CFR §122.41(m)(2)*].

3. Prohibition of bypass – Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless [*40 CFR §122.41(m)(4)(i)*]:

    a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [*40 CFR §122.41(m)(4)(A)*];

    b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [*40 CFR §122.41(m)(4)(B)*]; and

    c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [*40 CFR §122.41(m)(4)(C)*].

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [*40 CFR §122.41(m)(4)(ii)*].

5. Notice

    a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [*40 CFR §122.41(m)(3)(i)*].

    b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below [*40 CFR §122.41(m)(3)(ii)*].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed

treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [*40 CFR §122.41(n)(1)*].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [*40 CFR §122.41(n)(2)*].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [*40 CFR §122.41(n)(3)*]:

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*40 CFR §122.41(n)(3)(i)*];

   b. The permitted facility was, at the time, being properly operated [*40 CFR §122.41(n)(3)(i)*];

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [*40 CFR §122.41(n)(3)(iii)*]; and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [*40 CFR §122.41(n)(3)(iv)*].

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [*40 CFR §122.41(n)(4)*].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [*40 CFR §122.41(f)*].

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [*40 CFR §122.41(b)*].

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [*40 CFR §122.41(l)(3)*] [*40 CFR §122.61*].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [*40 CFR §122.41(j)(1)*].

B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [*40 CFR §122.41(j)(4)*] [*40 CFR §122.44(i)(1)(iv)*].

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [*40 CFR §122.41(j)(2)*].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [*40 CFR §122.41(j)(3)(i)*];

2. The individual(s) who performed the sampling or measurements [*40 CFR §122.41(j)(3)(ii)*];

3. The date(s) analyses were performed [*40 CFR §122.41(j)(3)(iii)*];

4. The individual(s) who performed the analyses [*40 CFR §122.41(j)(3)(iv)*];

5. The analytical techniques or methods used [*40 CFR §122.41(j)(3)(v)*]; and

6. The results of such analyses [*40 CFR §122.41(j)(3)(vi)*].

C. Claims of confidentiality for the following information will be denied [*40 CFR §122.7(b)*]:

1. The name and address of any permit applicant or Discharger [*40 CFR §122.7(b)(1)*]; and

2. Permit applications and attachments, permits and effluent data [*40 CFR §122.7(b)(2)*].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [*40 CFR §122.41(h)*] [*CWC 13267*].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [*40 CFR §122.41(k)*].

2. All permit applications shall be signed as follows:

   a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [*40 CFR §122.22(a)(1)*];

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*40 CFR §122.22(a)(2)*]; or

c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (*e.g.*, Regional Administrators of USEPA) [*40 CFR §122.22(a)(3)*].

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in paragraph (2.) of this provision [*40 CFR §122.22(b)(1)*];

   b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [*40 CFR §122.22(b)(2)*]; and

   c. The written authorization is submitted to the Regional Water Board, State Water Board, or USEPA [*40 CFR §122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, State Water Board, or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

   "*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware*

that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [*40 CFR §122.22(d)*].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [*40 CFR §122.41(l)(4)*].

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [*40 CFR §122.41(l)(4)(i)*].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [*40 CFR §122.41(l)(4)(ii)*].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [*40 CFR §122.41(l)(4)(iii)*].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [*40 CFR §122.41(l)(5)*].

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [*40 CFR §122.41(l)(6)(i)*].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [*40 CFR §122.41(l)(6)(ii)*]:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(A)*].

   b. Any upset that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(B)*].

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*40 CFR §122.41(l)(6)(ii)(C)*].

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [*40 CFR §122.41(l)(6)(iii)*].

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [*40 CFR §122.41(l)(1)*]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b) [*40 CFR §122.41(l)(1)(i)*]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*40 CFR §122.41(l)(1)(ii)*].

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*40 CFR §122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [*40 CFR §122.41(l)(2)].*

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*40 CFR §122.41(l)(7)*].

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT—NOT APPLICABLE

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [*40 CFR §122.42(b)*]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [*40 CFR §122.42(b)(1)*]; and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [*40 CFR §122.42(b)(2)*].

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [*40 CFR §122.42(b)(3)*].

Attachment E – Monitoring and Reporting Program – Table of Contents

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.

B. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.

C. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Influent to Facility
EFF-002	EFF-002	Effluent from existing Facility
EFF-001	EFF-001	Effluent from new Facility
--	R-001	Feather River 100 feet upstream of the northernmost pond
	R-002[1]	Feather River 100 feet upstream of the point of discharge to river
	R-003	Feather River 100 feet downstream of the southernmost pond
	R-004[1]	Feather River 600 feet downstream of the point of discharge to river
	PND-001	Pond 1
	PND-002	Pond 2
	PND-003	Pond 3
	PND-004	Pond 4
	PND-005	Pond 5
	PND-006	Pond 6
	PND-007	Pond 7
	PND-XXX	Any additional pond(s) that may be constructed after adoption of this Order.
	G-001	Groundwater Monitoring Well #1
	G-002	Groundwater Monitoring Well #2
	G-003	Groundwater Monitoring Well #3
	S-001	Municipal Water Supply
	B-001	Biosolids

1. To be determined in accordance with Provision VI.C.2.f.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. Samples shall be collected at approximately the same time as effluent samples and should be representative of the influent for the period sampled. The Discharger shall monitor influent to the WWTP at INF-001 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
5-Day BOD_5[1]	mg/L, lbs/day	24-hr. Composite	3 Times Weekly	
TSS[2]	mg/L, lbs/day	24-hr. Composite	3 Times Weekly	
pH	pH Units	Meter	Continuous	
Priority Pollutants	µg/L	As Appropriate	Annually	
Flow	mgd	Meter	Continuous	

1. 5-day 20°C biochemical oxygen demand.
2. Total suspended solids.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. Effluent samples shall be collected downstream from the last connection through which wastes can be admitted into the outfall, following the last unit process. Effluent samples should be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. The Discharger shall monitor treated effluent at EFF-001 as follows:

Parameter[1]	Units	Sample Type	Minimum Sampling Frequency
Flow	mgd	Meter	Continuous
Total Residual Chlorine[2]	mg/L, lbs/day	Meter	Continuous
Dechlorination[3]	mg/L, lbs/day	Meter	Continuous
pH	Number	Meter	Continuous
Turbidity	NTU	Meter	Continuous
Temperature	°F	Grab	Daily
Electrical Conductivity[4] @ 25°C	µmhos/cm	Meter	Continuous
Settleable Solids	m///	24-Hour Composite	5 Times Weekly
Total Coliform Organisms	MPN/100 m/	Grab	3 Times Weekly
5-day BOD_5	mg/L, lbs/day	24-Hour Composite	3 Times Weekly
Total Suspended Solids	mg/L, lbs/day	24-Hour Composite	3 Times Weekly
Ammonia, Total (as N)[5]	mg/L, lbs/day	Grab	3 Times Weekly
Nitrate (as N)	mg/L, lbs/day	Grab	Twice Monthly
Nitrite (as N)	mg/L, lbs/day	Grab	Twice Monthly
Hardness (as $CaCO_3$)	mg/L	24-Hour Composite	Monthly
Total Dissolved Solids	mg/L, lbs/day	Grab	Monthly
Aluminum, Acid-Soluble[6]	µg/L	24-Hour Composite	Monthly
Bis (2-ethylhexyl) phthalate[7]	µg/L, lbs/day	Grab	Monthly
Chloroform[7]	µg/L, lbs/day	Grab	Monthly
Chromium (VI), Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Monthly
cis-1,2-Dichloroethene	µg/L	Grab	Monthly
Copper, Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Monthly
Cyanide, Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Monthly
Diazinon	µg/L, lbs/day	Grab	Monthly
Dibenzo(a,h)anthracene[7]	µg/L, lbs/day	Grab	Monthly

Parameter[1]	Units	Sample Type	Minimum Sampling Frequency
Dichlorobromomethane[7]	µg/L	Grab	Monthly
Iron, Total Recoverable	µg/L	24-Hour Composite	Monthly
Lead, Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Monthly
Manganese, Total Recoverable	µg/L	24-Hour Composite	Monthly
Mercury, Total Recoverable[7,8]	µg/L, lbs/day	24-Hour Composite	Monthly
Mercury, Methyl	µg/L, lbs/day	24-Hour Composite	Quarterly
Methoxychlor	µg/L	Grab	Monthly
Oil and Grease	mg/L, lbs/day	Grab	Monthly
Organochlorine Pesticides[7,9]	µg/L, lbs/day	Grab	Monthly
Standard Minerals[10]	mg/L	24-Hour Composite	Annually
Tetrachloroethene[7]	µg/L	Grab	Monthly
Thiobencarb	µg/L, lbs/day	Grab	Monthly
Zinc, Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Monthly
Priority Pollutants[7,11]	µg/L, lbs/day	As Appropriate[12]	Twice Annually

1. Whole effluent monitoring shall be taken in accordance with Section V of the MRP.
2. If chlorine disinfection is utilized at the WWTP and/or water treatment plant, total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L.
3. If chlorine disinfection is utilized at the WWTP and/or the water treatment plant, the chemical used to dechlorinate the effluent (***e.g.***, sulfur dioxide) shall be monitored continuously.
4. The Discharger shall identify the 30-day 90th percentile effluent EC based upon continuous EC monitoring.
5. Temperature and pH shall be recorded at the time of ammonia sample collection.
6. Compliance can be demonstrated using either total, or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by U.S. EPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.
7. Detection limits shall be equal to or less than the lowest minimum level published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Plan or SIP). For organochlorine pesticides not listed in Appendix 4, the lowest possible detectable level shall be used with a maximum acceptable detection level of 0.05 µg/L.
8. Total recoverable mercury shall be analyzed using EPA Method 1631.
9. Organochlorine Pesticides include, but are not limited to aldrin, alpha BHC, beta BHC, delta BHC, lindane (gamma BHC), 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, chlordane, dieldrin, endrin, endrin aldehyde, alpha endosulfan, beta endosulfan, endosulfan sulfate, heptachlor, heptachlor epoxide, and toxaphene. All peaks are to be reported, along with any explanation provided by the laboratory.
10. Standard minerals shall include all major cations and anions and include verification that the analysis is complete (*i.e.*, cation/anion balance).
11. Concurrent with receiving water sampling.
12. Volatile samples shall be grab samples; the remainder shall be 24-hour composite samples.

2. If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record data for all of the constituents listed above, except for priority pollutants, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to

monitor and record data more often than twice the frequencies listed in the schedule.

B. **Monitoring Location EFF-002**

1. Effluent samples shall be collected downstream from the last connection through which wastes can be admitted into the outfall, following the last unit process. Effluent samples should be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. The Discharger shall monitor treated effluent at EFF-002 as follows:

Parameter[1]	Units	Sample Type	Minimum Sampling Frequency
Flow	mgd	Meter	Continuous
Total Residual Chlorine[2]	mg/L, lbs/day	Grab	Continuous
Dechlorination[3]	mg/L, lbs/day	Meter	Continuous
pH	Number	Grab	Daily
Temperature	°F	Grab	Daily
Electrical Conductivity[4] @ 25°C	µmhos/cm	Grab	Continuous
Settleable Solids	m///	Grab	Weekly
Total Coliform Organisms	MPN/100 m/	Grab	Weekly
5-day BOD_5	mg/L, lbs/day	24-Hour Composite	Weekly
Total Suspended Solids	mg/L, lbs/day	24-Hour Composite	Weekly
Ammonia, Total (as N)[5]	mg/L, lbs/day	Grab	Twice Weekly
Nitrate (as N)	mg/L, lbs/day	Grab	Monthly
Nitrite (as N)	mg/L, lbs/day	Grab	Monthly
Hardness (as $CaCO_3$)	mg/L	24-Hour Composite	Quarterly
Total Dissolved Solids	mg/L, lbs/day	Grab	Quarterly
Aluminum, Acid-Soluble[6]	µg/L	24-Hour Composite	Quarterly
Bis (2-ethylhexyl) phthalate[7]	µg/L, lbs/day	Grab	Quarterly
Chloroform[7]	µg/L, lbs/day	Grab	Quarterly
Chromium (VI), Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Quarterly
cis-1,2-Dichloroethene	µg/L	Grab	Quarterly
Copper, Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Quarterly
Cyanide, Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Quarterly
Diazinon	µg/L, lbs/day	Grab	Monthly
Dibenzo(a,h)anthracene[7]	µg/L, lbs/day	Grab	Quarterly

Parameter[1]	Units	Sample Type	Minimum Sampling Frequency
Dichlorobromomethane[7]	µg/L	Grab	Quarterly
Iron, Total Recoverable	µg/L	24-Hour Composite	Quarterly
Lead, Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Quarterly
Manganese, Total Recoverable	µg/L	24-Hour Composite	Quarterly
Mercury, Total Recoverable[7,8]	µg/L, lbs/day	24-Hour Composite	Monthly
Methoxychlor	µg/L	Grab	Quarterly
Oil and Grease	mg/L, lbs/day	Grab	Monthly
Organochlorine Pesticides[7,9]	µg/L, lbs/day	Grab	Monthly
Standard Minerals[10]	mg/L	24-Hour Composite	Annually
Tetrachloroethene[7]	µg/L	Grab	Quarterly
Thiobencarb	µg/L, lbs/day	Grab	Quarterly
Zinc, Total Recoverable[7]	µg/L, lbs/day	24-Hour Composite	Quarterly
Priority Pollutants[7,11]	µg/L, lbs/day	As Appropriate[12]	Annually

1. Whole effluent monitoring shall be taken in accordance with Section V of the MRP.
2. If chlorine disinfection is utilized at the WWTP and/or water treatment plant, total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L.
3. If chlorine disinfection is utilized at the WWTP and/or the water treatment plant, the chemical used to dechlorinate the effluent (***e.g.***, sulfur dioxide) shall be monitored continuously.
4. The Discharger shall identify the 30-day 90th percentile effluent EC based upon continuous EC monitoring.
5. Temperature and pH shall be recorded at the time of ammonia sample collection.
6. Compliance can be demonstrated using either total, or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by U.S. EPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.
7. Detection limits shall be equal to or less than the lowest minimum level published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Plan or SIP). For organochlorine pesticides not listed in Appendix 4, the lowest possible detectable level shall be used with a maximum acceptable detection level of 0.05 µg/L.
8. Total recoverable mercury shall be analyzed using EPA Method 1631.
9. Organochlorine Pesticides include, but are not limited to aldrin, alpha BHC, beta BHC, delta BHC, lindane (gamma BHC), 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, chlordane, dieldrin, endrin, endrin aldehyde, alpha endosulfan, beta endosulfan, endosulfan sulfate, heptachlor, heptachlor epoxide, and toxaphene. All peaks are to be reported, along with any explanation provided by the laboratory.
10. Standard minerals shall include all major cations and anions and include verification that the analysis is complete (*i.e.*, cation/anion balance).
11. Concurrent with receiving water sampling.

2. If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record data for all of the constituents listed above, except for priority pollutants, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. **Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. *Monitoring Frequency* – the Discharger shall perform monthly acute toxicity testing, concurrent with effluent ammonia sampling.

2. *Sample Types* – For Static Non-renewal and Static Renewal testing, the samples shall be 24-hour flow proportional composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001 or EFF-002.

3. *Test Species* – Test species shall be larval stage (0 to 14 days old) or rainbow trout (*Oncorhynchus mykiss*).

4. *Methods* – The acute bioassays tests shall be conducted in accordance with EPA-821-R-02-012, Fifth Edition, or later amendment with Executive Officer approval. No pH adjustment may be made unless approved by the Executive Officer.

5. *Test Failure* – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed three (3) business days following notification of test failure.

B. **Chronic Toxicity Testing.** Chronic toxicity monitoring shall be conducted to determine whether the effluent is contributing toxicity to the receiving water. Chronic toxicity samples shall be collected from the effluent of the WWTP when discharging to the Feather River, after the last unit process, prior to its entering the receiving stream. Twenty-four hour composite samples shall be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. Control waters shall be obtained immediately upstream of the discharge from an area unaffected by the discharge in the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results. Monthly laboratory reference toxicant tests may be substituted. Both the reference toxicant and effluent test must meet all test acceptability criteria as specified in the chronic manual. If the test acceptability criteria are not achieved, then the Discharger must re-sample and re-test within 14 days. Chronic toxicity monitoring shall include the following:

Species: *Pimephales promelas* (larval stage), *Ceriodaphnia dubia*, and *Selenastrum capricornutum*

Frequency: Monitoring shall be conducted once per quarter, four quarters per year.

Methods: The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents*

and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002, or later amendment with Executive Officer approval.

Dilution: The chronic toxicity testing shall be performed using the dilution series identified in Table E-1, below. Reconstituted or uncontaminated dilution water and the receiving water control shall be used as the diluents.

Table E-1
Chronic Toxicity Testing Dilution Series

Sample	Dilutions (%)							Controls	
	100	x[1]	25% less[2]	25% more[3]	x	25% less[2]	25% more[3]	Receiving Water	Laboratory Water
Effluent	100	x	.75x	1.25x	x[1]	.75x	1.25x	0	0
Receiving Water	0	1-x	1-.75x	1-1.25x	0	0	0	100	0
Laboratory Water	0	0	0	0	1-x	1-.75x	1-1.25x	0	100

1. x = The dilution of the effluent in the Feather River at the time of the sample collection.
2. 25% less dilution (+/-2%) than the dilution of the effluent in the Feather River at the time of sample collection.
3. 25% more dilution (+/-2%) than the dilution of the effluent in the Feather River at the time of sample collection.

C. **WET Testing Notification Requirements.** The Discharger shall notify the Regional Water Board within 24-hrs after the receipt of results of an exceedance of the TRE trigger, during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.

D. **WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. <u>At a minimum, whole effluent toxicity monitoring shall be reported as follows:</u>

1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:

   a. The results expressed in TUc, measured as 100/NOEC, and also measured as 100/LC50 100/EC_{25}, 100/IC_{25}, and 100/IC_{50}, as appropriate;

   b. The statistical methods used to calculate endpoints;

   c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);

   d. The dates of sample collection and initiation of each toxicity test; and

   e. The results compared to the numeric toxicity trigger.

Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE.

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports, reported as percent survival.

3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Workplan.

4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:

   a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.

   b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.

   c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

A. Pond Monitoring—Monitoring Location PND-001, PND-002, PND-003, PND-004, PND-005, PND-006, PND-007

1. Pond monitoring shall be conducted when water is present in the ponds. All pond samples shall be grab samples. The Discharger shall monitor the ponds at PND-001, PND-002, PND-003, PND-004, PND-005, PND-006, and PND-007 and any additional ponds, at a minimum as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Freeboard	Feet[1]	--	Weekly	
Dissolved Oxygen	mg/L	Grab[2]	Weekly	
Odors	--	--	Weekly	
Electrical Conductivity	µmhos/cm	Grab	Weekly	

1. Freeboard shall be monitored to the nearest tenth of a foot.
2. Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet, and analyzed for dissolved oxygen. Samples shall be collected between 0700 and 0900 hours. If dissolved oxygen results for any pond in use indicate noncompliance with the discharge specification, the Discharger shall implement corrective measures as specified in the operation and maintenance manual and monitor said pond daily until its dissolved oxygen stabilizes above 1 mg/L. If there is insufficient pond depth to accurately measure the dissolved oxygen concentration, the Discharger shall include in its report the pond depth and an explanation why dissolved oxygen monitoring was not performed.

2. In addition, the Discharger shall inspect the condition of the ponds once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether burrowing animals or insects are present; and the color of the ponds (*e.g.*, dark sparkling green, dull green, yellow, gray, tan, brown, *etc*.). A summary of the entries made in the log during each month shall be submitted along with the monitoring report the following month. If the Discharger finds itself in violation of the Discharge Specifications, the Discharger shall briefly explain the action taken or to be taken to correct the violation. The Discharger shall certify in each November monitoring report that it is in compliance with the Discharge Specifications.

VII. RECLAMATION MONITORING REQUIREMENTS—NA

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Location R-001, R-002, R-003, and R-004

1. The Discharger shall monitor the Feather River at R-001, R-002, R-003, and R-004 as follows:

Parameter[1,2]	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L, % saturation	Grab	Weekly	[3]
pH[4]	Number	Grab	Weekly	[3]
Turbidity	NTU	Grab	Weekly	[3]
Temperature[4]	°F	Grab	Weekly	[3]
Electrical Conductivity	µmhos/cm	Grab	Weekly	[3]
TSS	mg/L	Grab	Weekly	
Settleable Solids	mL/L	Grab	Weekly	
Fecal Coliform Organisms	MPN/100 m/	Grab	Quarterly	
Radionuclides	pCi//	Grab	Annually	
Trihalomethanes[5,6]	µg/L	Grab	Annually	
Thiobencarb	µg/L	Grab	Annually	
Priority Pollutants[5,7]	µg/L	Grab	Annually	
Hardness (as $CaCO_3$)	mg/L	Grab	Monthly	

1. The Discharger may postpone monitoring at R-002 and R-004 until commencement of discharge at EFF-001.
2. The Discharger may cease monitoring R-001 and R-003 upon closure of all ponds within the Feather River floodplain.
3. A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the WWTP.
4. Temperature and pH shall be determined at the time of sample collection.
5. Detection limits shall be equal to or less than the lowest minimum level published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Plan).
6. If chlorine is utilized at the WWTP and/or at the water treatment plant, trihalomehtanes must be monitored. Trihalomethanes include bromoform, chloroform, bromodichloromethane, and dibromochloromethane.
7. Concurrent with effluent sampling.

2. The Discharger shall monitor the Feather River at locations in accordance with Provision VI.C.2.e as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Electrical Conductivity	µmhos/cm	Grab	Weekly	
Chloroform[1]	µg/L	Grab	Annually	
cis-1,2-dichloroethene	µg/L	Grab	Annually	
Dichlorobromomethane[1]	µg/L	Grab	Annually	
MBAS	µg/L	Grab	Annually	
Tetrachloroethene[1]	µg/L	Grab	Annually	
Thiobencarb	µg/L	Grab	Annually	

1. Detection limits shall be equal to or less than the lowest minimum level published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Plan or SIP).

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by the uppermost and lowermost stations. Attention shall be given to the presence or absence of:

a. Floating or suspended matter
b. Discoloration
c. Bottom deposits
d. Aquatic life
e. Visible films, sheens or coatings
f. Fungi, slimes, or objectionable growths
g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monitoring report.

B. Monitoring Location G-001, G-002, G-003

1. Groundwater grab samples shall be collected from all groundwater monitoring wells. Prior to sampling, the wells should be pumped until the temperature, specific conductivity, and pH have stabilized to ensure representative samples. The Discharger shall monitor groundwater at G-001, G-002, and G-003 as follows:

Parameter[1]	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Depth to Groundwater[2]	feet	Grab	Monthly	
Groundwater Elevation	feet	Grab	Monthly	
Gradient	Feet/feet	calculated	1/quarter	
Gradient Direction	degrees	calculated	1/quarter	
pH	pH units	Grab	Monthly	
Electrical Conductivity at 25ºC	µmhos/cm	Grab	Monthly	
TDS	mg/L	Grab	Monthly	
Total Nitrogen	mg/L	Grab	Quarterly	
Nitrate (as N)	mg/L	Grab	Quarterly	
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	Quarterly	
Total Coliform Organisms	MPN/100 mL	Grab	Quarterly	
Fecal Coliform Organisms[3]	MPN/100 mL	Grab	Quarterly	
Standard Minerals[4]	mg/L	Grab	Quarterly	
Title 22 Metals[5]	mg/L	Grab	1/year	

1. The Discharger may request to cease groundwater monitoring upon cessation of all discharge to land and closure of all ponds within the Feather River levees.
2. Groundwater elevation shall be used to calculate the direction and gradient of groundwater flow. Elevations shall be measured to the nearest one-hundredth of a foot from mean sea level. The groundwater elevation shall be measured prior to purging the wells.
3. Sampling for fecal coliform shall be performed for at least two consecutive quarters in any groundwater monitoring well following the detection in that well of total coliform organisms in excess of 2.2 MPN/100 ml.
4. Standard Minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness.
5. Title 22 metals shall include the analyses of arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc.

IX. OTHER MONITORING REQUIREMENTS

A. Water Supply Monitoring—Monitoring Location S-001

1. A sampling station shall be established where a representative sample of the municipal water supply can be obtained. The Discharger shall monitor the water supply at S-001 as follows:

Parameter[1]	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids	mg/L	Grab	Quarterly	
Electrical Conductivity	µmhos/cm	Grab	Quarterly	
Standard Minerals[2]	mg/L	Grab	Annually	

1. If the water supply is from more than one source, the monitoring report shall report the electrical conductivity and total dissolved solids results as a weighted average and include copies of supporting calculations.
2. Standard minerals shall include all major cations and anions and include verification that the analysis is complete (*i.e.*, cation/anion balance).

B. Sludge Monitoring—Monitoring Location B-001

1. A composite sample of sludge shall be collected when sludge is removed from the ponds for disposal in accordance with USEPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for the metals listed in Title 22.

2. Sampling records shall be retained for a minimum of **five years**. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.

3. Upon removal of sludge, the Discharger shall submit characterization of sludge quality, including sludge percent solids and quantitative results of chemical analysis for the priority pollutants listed in 40 CFR 122 Appendix D, Tables II and III (excluding total phenols). Suggested methods for analysis of sludge are provided in USEPA publications titled "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods" and "Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater." Recommended analytical holding times for sludge samples should reflect those specified in 40 CFR §136.6.3(e). Other guidance is available in USEPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to Section 313 of the "Emergency Planning and Community Right to Know Act of 1986.

3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the reported analytical result are readily discernible. The data shall be summarized in such a manner to clearly illustrate whether the discharge complies with waste discharge requirements. Monthly maximums, minimums, and averages shall be reported for each monitored constituent and parameter. Removal efficiencies (%) for BOD and TSS and all periodic averages and medians for which there are limitations shall also be calculated and reported.

4. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.

2. The Discharger shall submit monthly, quarterly, semiannual, annual Self Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due on the 1st day of the second month following the end of each calendar month; Quarterly reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter; Semi-annual reports shall be due on August 1 and February 1 following each semi-annual period; Annual reports shall be due on February 1 following each calendar year.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	**11 November 2006**	All	Submit with monthly SMR
Hourly	**11 November 2006**	Hourly	Submit with monthly SMR
Daily	**11 November 2006**	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
5 Times Weekly	**12 November 2006**	Sunday through Saturday	Submit with monthly SMR
3 Times Weekly	**12 November 2006**	Sunday through Saturday	Submit with monthly SMR
Weekly	**12 November 2006**	Sunday through Saturday	Submit with monthly SMR
Twice Monthly	**1 December 2006**	1st day of calendar month through last day of calendar month	Submit with monthly SMR
Monthly	**1 December 2006**	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
Quarterly	**1 January 2007**	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Twice annually	**1 January 2007**	January 1 through June 30 July 1 through December 31	August 1 February 1
Annually	**1 January 2007**	January 1 through December 31	February 1

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

   California Regional Water Quality Control Board
   Central Valley Region
   11020 Sun Center Drive, #200
   Rancho Cordova, CA 95670

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (DMRs) in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

   State Water Resources Control Board
   Discharge Monitoring Report Processing Center
   Post Office Box 671
   Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

1. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, *etc*.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.

2. By **1 February** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:

   a. The names, certificate grades, and general responsibilities of all persons employed at the WWTP.

   b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.

   c. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

e. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

Attachment F – Fact Sheet – Table of Contents

ATTACHMENT F – FACT SHEET

As described in Section II of this Order, this Fact Sheet includes legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This renewed Order regulates the discharge of up to **1.8 million gallons per day (mgd)**, design average dry weather flow (ADWF), of effluent from the **existing** WWTP, and **5.0 mgd** ADWF from the **new, updated** WWTP. This Order includes effluent, groundwater, water supply, sludge, and surface water limitations, monitoring and reporting requirements, additional study requirements, and reopener provisions for effluent, surface receiving water, and groundwater constituents.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility:

WDID	5A580100002
Discharger	Linda County Water District
Name of Facility	Wastewater Treatment Plant
Facility Address	909 Myrna Avenue Marysville, CA 95901 Yuba County (WWTP), Sutter County (disposal ponds and proposed outfall)
Facility Contact, Title and Phone	John Harvey (Plant Contact) (530) 743-2756 Doug Lofton, General Manager (530) 743-2043
Authorized Person to Sign and Submit Reports	Doug Lofton, General Manager (530) 743-2043
Mailing Address	1280 Scales Street Marysville, CA 95901
Billing Address	1280 Scales Street Marysville, CA 95901
Type of Facility	POTW (Standard Industrial Classification Code: 4952)
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	N (Existing Plant) and Y (New Plant)
Reclamation Requirements	NA
Facility Permitted Flow	Existing Plant: 1.8 mgd (average dry weather flow) Proposed Plant: 5.0 mgd (average dry weather flow)
Facility Design Flow	Existing Plant: 1.8 mgd (average dry weather flow) Proposed Plant: 5.0 mgd (average dry weather flow)
Watershed	Sacramento Hydrologic Basin Marysville Hydrologic Unit (515.00) Olivehurst Hydrologic Area (515.20)
Receiving Water	Feather River
Receiving Water Type	NA

A. Linda County Water District (hereinafter Discharger) is the owner and operator of the Wastewater Treatment Plant (hereinafter WWTP) a POTW.

B. The WWTP discharges wastewater to the Feather River, a water of the United States, and is currently regulated by Order 5-00-165 which was adopted on 16 June 2000 and expired on 1 June 2005. Order 5-00-165 automatically continues in effect after the permit expiration date, until it has been rescinded.

C. The Discharger filed a Draft Report of Waste Discharge, dated 1 December 2004, and a Report of Waste Discharge, dated 31 May 2005, that applied for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit to discharge up to the Design Flow Rate of 1.8 million gallons per day (mgd) of treated wastewater from the existing Linda County Water District WWTP and up to the Design Flow Rate of 5.0 mgd of treated wastewater from the proposed new Linda County Water District WWTP. The application was deemed complete on 1 June 2005.

II. FACILITY DESCRIPTION

The Linda County Water District (Discharger) provides sewerage service for the community of Linda and portions of unincorporated Yuba County south of Marysville, and serves a population of approximately 12,000. The current Facility design average dry weather flow capacity is 1.8 mgd. The proposed new, updated Facility total design average dry weather flow capacity is 5.0 mgd.

A. Description of Wastewater and Biosolids Treatment or Controls

The **existing** treatment system consists of the headworks, primary clarification, a trickling filter, secondary clarification, disinfection and dechlorination, and sludge digesters. Treated wastewater is normally discharged to land using a series of seven percolation/evaporation ponds that lie within the Feather River floodplain. The pond levees have been overtopped during high river stages and the wastewater from the ponds has been discharged to the Feather River. The Discharger maintains a wastewater outfall pipeline at the discharge point, latitude 39º 5' N and longitude 121º 35' W, to the Feather River, a water of the United States and tributary to the Sacramento River within the Olivehurst Hydrologic Area of the Marysville Hydrologic Unit, in the Sacramento Hydrologic Basin. The existing outfall pipeline, which was a single point discharge at the shoreline, has not been used for many years.

Attachment B provides a topographic map of the facility and vicinity. Attachment C provides a flow schematic of the facility.

B. Discharge Points and Receiving Waters

1. The WWTP is in Section 1, T14N, R3E, MDB&M, as shown on Attachment B, a part of this Order. The **existing** WWTP has been permitted to discharge treated

municipal and industrial wastewater to the Feather River, a water of the United States at the point, latitude 39º 05' 42" N and longitude 121º 35' 32" W.

2. The **new** WWTP will discharge treated municipal wastewater to the Feather River at the same location (latitude 39º 05' 42" N and longitude 121º 35' 32" W), or to another location several thousand feet upstream. However, the outfall will be equipped with a diffuser that extends into the river along the river bottom.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

1. In **existing** Order No. 5-00-165, Effluent Limitations for discharges to the Feather River (**existing** Discharge Point 002 – **new** Discharge Point EFF-001) and representative monitoring data generated under the existing Order are as follows:

Parameter (units)	Effluent Limitation			Monitoring Data (From January 2001 – To August 2005)		
	Average 30-Day	Average 7-Day	30-Day Median	Highest Average 30-Day Discharge	Highest Average 7-Day Discharge	Highest 30-Day Median
BOD (mg/L)	45	65	--	105.75	331.00	--
BOD (lb/day)	675	976	--	951.98	3093.66	--
TSS (mg/L)	45	65	--	37.00	61.30	--
TSS (lb/day)	675	976	--	410.07	783.09	--
Total Coliform Organisms(MPN/100ml)	--	--	240	--	--	735

2. The Report of Waste Discharge describes the discharge from the **existing** Facility as follows:

Design Flow (dry or wet weather):	1.8	million gallons per day(mgd)
Annual Average Daily Flow Rate:	1.24	mgd
Maximum Daily Flow Rate:	3.06	mgd
Average Temperature, Summer:	75	ºF
Average Temperature, Winter:	55	ºF
BOD[1]: Max/Ave	81/30	mg/L
Total Suspended Solids: Max/Ave	61/20	mg/L

1. 5-day, 20°C biochemical oxygen demand.

The Report of Waste Discharge describes the discharge from the **new** Facility as follows:

Design Flow (dry weather):	5.0	million gallons per day (mgd)
Annual Average Daily Flow Rate:	5.5	mgd
Maximum Daily Flow Rate:	10.0	mgd
Peak Hourly Flow Rate:	14.0	mgd
Average Temperature, Summer:	NA	ºF
Average Temperature, Winter:	NA	ºF
BOD[1]:	10	mg/L
Total Suspended Solids:	10	mg/L

1. 5-day, 20°C biochemical oxygen demand.

D. Compliance Summary

1. The Discharger is proposing to construct a new WWTP. Upon completion of the new tertiary facility, the character of the wastewater discharged will be significantly improved over the secondary level of treatment currently provided. This Order contains limitations based on the discharge from the existing facility. According to the Discharger, the new treatment system will be designed with the goal of achieving full compliance with Waste Discharge Requirements. However, due to the nature of emerging contaminants, additional measures may be required after construction, but prior to the final compliance date, to assure that all emerging contaminants respond satisfactorily to the proposed treatment process. Based on a characterization of the discharge quality, following startup of the new WWTP, this Order may be reopened and modified.

E. Planned Changes

1. Because of rapid residential growth in the community, additional wastewater treatment capacity is necessary. The Discharger has projected that a **new** treatment system will be completed during 2008 and will involve expanding and upgrading existing facilities and construction of new facilities to provide a tertiary (or equivalent) level of treatment and year-round nitrification/ denitrification. The existing pond system, which lies within the Feather River floodplain and when inundated constitutes a point discharge of waste, will be properly closed. The new treatment system is being designed to comply with priority pollutant water quality standards. The discharge point is in the area of the Feather River bounded by Shanghai Bend and Shanghai Falls, which is a well defined habitat for fish. The discharge of toxic substances of acutely or chronically toxic levels to aquatic life would significantly impair the critical fishery. The Discharger has found no assimilative capacity for aquatic life-based pollutants of concern as identified by its own Reasonable Potential Analysis with respect to available sampling data, and therefore has not requested a mixing zone for aquatic life-based criteria at this time. If new information becomes available regarding assimilative capacity for aquatic life-based criteria, the Discharger requests the ability to work with Regional Board staff on a re-opener of the permit with respect to aquatic life-based mixing zones at that time. Mixing zones are being included in this Order, for longer-term human health-based criteria, that will not impact the critical fishery. For the new treatment system an in-stream diffuser, designed to meet specific requirements for the mixing zones, will replace the shoreline discharge point. The **new** Facility will discharge treated municipal wastewater to the Feather River at the same location (latitude 39º 05’ 42” N and longitude 121º 35’ 32” W), or to another location several thousand feet upstream. However, the outfall at either location will be equipped with a diffuser that extends into the river along the river bottom. The Discharger simulated use of a submerged multiport diffuser that was designed to meet flow and pressure requirements. The modeled diffuser was 100 feet long, placed on the river bottom with 0.5-foot risers, and consisted of five evenly spaced ports. The minimum river width in the test area is 300 feet, therefore the diffuser occupied less than one-third of the river width.

2. Order 5-00-165 allowed the Discharger to discharge treated disinfected secondary wastewater into evaporation/percolation ponds for disposal. Although Order 5-00-165 also allowed discharge into the Feather River, all flows were maintained in the ponds. The ponds are located on the Feather River side of levees constructed to contain river flows. The ponds are within the floodplain of the Feather River. The ponds, containing wastewater are flooded by rising flood stages of the Feather River. Once the pond berms are overtopped, the ponds fill with river water and the commingled flows discharge into the Feather River. The discharge of wastewater from the ponds is a point discharge of waste to surface waters, which requires an NPDES permit. The discharge of wastes from the ponds to the Feather River was not addressed in Order 5-00-165.

   As a part of the Discharger's WWTP expansion/improvement project, the Discharger has proposed to eliminate the wastewater disposal ponds that are located within the Feather River levees. Therefore compliance with discharge limitations are subject to schedules contained in this Order, or an accompanying Compliance Order, based on closure of the ponds and elimination of the pond discharge.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to Section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA Section 402.

B. California Environmental Quality Act (CEQA)

The action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, *et seq*.), requiring preparation of an environmental impact report or negative declaration in accordance with Section 13389 of the California Water Code. The Discharger will also prepare and certify a final environmental impact report (EIR) in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, *et seq*.), and the State CEQA Guidelines for the wastewater treatment plant expansion and improvements. This Order requires the Discharger to satisfy CEQA requirements prior to discharge in excess of 1.8 mgd. The Regional Water Board will review and consider the EIR, and although these waste discharge requirements were developed to mitigate or avoid any significant impacts on water quality, if the EIR identifies any unmitigated water quality impacts,

this Order may be reopened and revised.

C. **State and Federal Regulations, Policies, and Plans**

1. ***Water Quality Control Plans*.** The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition,* for the *Sacramento and San Joaquin River Basins* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Beneficial uses applicable to the Feather River, downstream of the discharge, as designated in the Basin Plan, Table II-1, are as follows: municipal and domestic supply; agricultural supply; navigation; water contact and non-contact recreation including aesthetic enjoyment; commercial and sport fishing; aquaculture; warm freshwater habitat; cold freshwater habitat; warm migration of aquatic organisms; cold migration of aquatic organisms; warm spawning, reproduction, and/or early development; cold spawning, reproduction, and/or early development; and wildlife habitat.

Discharge Point	Receiving Water Name	Beneficial Use(s)
EFF-001	Feather River	Existing: Municipal and domestic supply (MUN); agricultural irrigation (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD).
EFF-002	Groundwater	Existing: Municipal and domestic supply (MUN), industrial service supply (IND), industrial process supply (PROC), and agricultural supply (AGR).
	Feather River	Existing: Municipal and domestic supply (MUN); agricultural irrigation (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD).

The Basin Plan on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…" and with respect to disposal of wastewaters states that "...disposal of wastewaters is* [not] *a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses*."

The Federal CWA, Section 101(a)(2), states: "*it is the national goal that wherever*

attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983." Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimable. Federal Regulations, 40 CFR §§ 131.2 and 131.10, require that all waters of the State be regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR §131.10, requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

Although the beneficial uses of the Feather River are designated in the Basin Plan, the Regional Water Board has considered the following facts, regarding preservation and enhancement of fish, wildlife, and other aquatic resources:

The California Department of Fish and Game (DFG) has verified that the fish species present in Feather River and downstream waters are consistent with both cold and warm water fisheries, that there is anadromous fish migration necessitating a cold water designation and that numerous cold water species, have been found both upstream and downstream of the WWTP. The Basin Plan (Table II-1) designates the Feather River as being both a cold and warm freshwater habitat. The cold-water habitat designation necessitates that the in-stream dissolved oxygen concentration be maintained at, or above, 7.0 mg/L.

The Discharger discharges treated wastewater to the Feather River at Shanghai Bend just upstream of Shanghai Falls. The *Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California; Final Rule*, (50 CFR Part 226.211), issued on 2 September 2005 and effective on 2 January 2006, designates the lower Feather River below Oroville Dam as critical habitat for Central Valley spring-run Chinook and Central Valley steelhead.

Regional Water Board staff consulted with the California Department of Fish and Game (DFG) regarding the fishery at Shanghai Bend and Shanghai Falls in the Feather River. A 17 November 2005 letter from DFG stated:

> The Feather River in this area supports fall-,late fall-, and spring-run Chinook salmon, steelhead trout, striped bass, American shad and a variety of other game and non-game species. Spring-run Chinook salmon are federal and state listed threatened species and steelhead trout is a federal listed threatened species.
>
> Because of the river configuration at Shanghai Bend, adult anadromous fish including fall-, late fall- and spring-run Chinook salmon, steelhead trout, striped bass, and American shad often congregate immediately below Shanghai Bend for

> extended durations during their upstream migration. During lower flow periods the problem is exasperated, and in fact some species (American shad and striped bass) appear to be essentially blocked (DFG unpublished data) immediately below Shanghai Bend.
>
> Additionally, juveniles (including listed federal and state species) use the area for rearing and migration. The entire instream production of salmonids (fall-, late fall- and spring-run Chinook salmon, and steelhead trout) in the Feather River and Yuba River must pass Shanghai Bend. The Yuba River is basically the last large river in the Central Valley that is maintained solely by natural in-stream production of salmon and steelhead trout, and is essentially the only wild steelhead fishery remaining in the Central Valley.
>
> Because of the extended periods that juvenile and adult fish spend in the Feather River at Shanghai Bend, they would be subject to extended exposure to any discharges. It is likely that such exposure will ultimately result in decrease population viability and survival of salmonids and other species, including federal and state listed species. We would recommend that because of the anadromous species (in particular listed species present) and the potential for extended exposure to the proposed discharge, that the allowance of a mixing zone is not appropriate.

On 29 March 2005, DFG staff responded via email, in summary that: fish, specifically American Chad, Striped Bass, Chinook Salmon and Green Sturgeon are impacted by Shanghai Falls and tend to "hold a bit below the falls" and may remain below the falls for longer periods, particularly during low water years, thereby increasing exposure times, and that DFG would never support a project that discharges acutely toxic materials to a waterway that will likely soon be designated as critical habitat.

In June of 2003, the California Department of Water Resources (DWR) prepared a draft report *Juvenile Fishes of the Lower Feather River: Distribution, Emigration Patterns, and Association with Environmental Variables* which states in the introduction that "The Feather River is significant because it is the largest tributary to the Sacramento River system, is home to two federally listed endangered species (Central Valley spring-run Chinook salmon and Central Valley steelhead Orcorhynchus mykiss)…"

In email communications dated 27 December 2004, when asked about the Shanghai area of the Feather River, DWR staff stated:

> Adult salmon could certainly be present as early as Mid-April through the fall, although the majority will be present June-September. There is no evidence or reason for adult salmon to spend any length of time in this area. We have done some radio tracking studies in the Feather [River] recently but very few fish were monitored this low in the river. I would be potentially concerned about sturgeon adults (white and green) however. We have observed them at Shanghai in June. During low flows they may spend a large amount of time there.
>
> Large number of juveniles will be moving through the area from January through March…

A letter dated 25 April 1973 from the Wildlife Conservation Board discusses the Shanghai Bend area of the Feather River, in part, as follows:

> The affected portion of the Feather River is a well-known shad and striped bass fishing area and, in spite of the lack of public access, is heavily fished. At least ten percent of all the Feather River shad fishing occurs in the vicinity of the 108-acre Steele property. This use amounts to about 4,000 angler days per year…Other angler attractions include runs of 50 to 60 thousand adult king salmon, which pass through the Shanghai Bend area each year and fair to excellent populations of smallmouth bass and channel catfish, which attract fishermen on a year-round basis.

Upon review of the flow conditions, habitat values, and beneficial uses of Feather River, and the facts described above, the Regional Water Board finds that the beneficial uses identified in the Basin Plan for the Feather River are applicable.

2. ***National Toxics Rule (NTR) and California Toxics Rule (CTR)***. USEPA adopted the NTR on 22 December 1992, which was amended on 4 May 1995 and 9 November 1999, and the CTR on 18 May 2000, which was amended on 13 February 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

3. ***State Implementation Policy***. On 2 March 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP*).* The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on 22 May 2000. The SIP became effective on 18 May 2000. The SIP includes procedures for determining the need for and calculating water quality-based effluent limitations (WQBELs), and requires Dischargers to submit data sufficient to do so.

4. ***Antidegradation Policy***. Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.

   The permitted discharge is consistent with the antidegradation provisions of 40 CFR §131.12 and State Water Resources Control Board Resolution 68-16. This Order allows the discharge flow to increase only after the WWTP has been

upgraded from secondary to tertiary or equivalent. To protect aquatic life beneficial uses, this Order does not grant dilution for aquatic life-based constituents (i.e., end of pipe limitations). This Order also requires new and more stringent effluent limitations compared to the previous permit to reduce concentrations of pollutants in which reasonable potential was determined, and additional corresponding mass limitations for those pollutants that are bioaccumulative. New effluent limitations in this Order, not allowing an increased concentration to be discharged into the river, are as follows: aluminum, ammonia, bis(2-ethylhexyl)phthalate, chloroform, chromium (VI), copper, cyanide, diazinon, dibenzo(a,h)anthracene, cis-1,2-dichloroethene, dichlorobromomethane, electrical conductivity, lead, iron, manganese, mercury, methoxychlor, methylene blue active substances, nitrite, nitrate, oil and grease, organochlorine pesticides, tetrachloroethene, thiobencarb, turbidity, and zinc. More stringent effluent limitations are as follows: biochemical oxygen demand, total suspended solids, total coliform organisms, and pH.

The improved treatment of WWTP effluent will lower the impacts of increased flow. For example, at the permitted average dry weather flow, this Order contains more stringent mass limits for BOD and TSS than the previous Order, as shown below:

At the average dry weather flow of 1.8 mgd, the previous permit allowed a BOD and TSS mass loading of 1.8 mgd x 45 mg/L x 8.34 = 680 lbs/day

At the average dry weather flow of 5.0 mgd, this Order allows a mass loading of 5.0 mgd x 10 mg/L x 8.34 = 420 lbs/day

The Discharger proposes to design the new WWTP to discharge an annual average daily flow rate of 5.5 mgd, and at this flow rate, mass limitations for BOD and TSS are more stringent than the mass limitations contained in the previous permit. At the annual average flow of 5.5 mgd, this Order allows a mass loading of 5.5 mgd x 10 mg/L x 8.34 = 460 lbs/day.

The increase in the discharge allows wastewater utility service necessary to accommodate housing and economic expansion in the area, and is considered to be a benefit to the people of the State. This Order requires a Salinity Reduction Study to identify alternatives addressing salinity concerns in the discharge. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

5. ***Anti-Backsliding Requirements***. Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. All effluent limitations in the Order are at least as stringent as the effluent limitations in the previous Order.

6. ***Monitoring and Reporting Requirements.*** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting

monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

7. ***Emergency Planning and Community Right to Know Act***. Section 13263.6(a), California Water Code, requires that "*the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRKA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective.*"

   The Regional Water Board has adopted numeric water quality objectives in the Basin Plan for the following constituent: styrene. Available effluent quality data indicate that this constituent does not have a reasonable potential to cause or contribute to an excursion above any numeric water quality objectives included within the Basin Plan or in any State Water Board plan, so no effluent limitations are included in this permit pursuant to CWC Section 13263.6(a).

8. ***Stormwater Requirements.*** USEPA promulgated Federal Regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from municipal sanitary sewer systems. Wastewater treatment plants are applicable industries under the stormwater program and are obligated to comply with the Federal Regulations.

9. ***Endangered Species Act.*** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

D. Impaired Water Bodies on CWA 303(d) List

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)*." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers*

will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment." The lower Feather River is listed as a WQLS for mercury, toxicity, Group A pesticides, and toxaphene and is listed in the 303(d) list of impaired water bodies for diazinon, Group A pesticides, mercury, and unknown toxicity.

Mercury bioaccumulates in fish tissue and, therefore, discharge of an additional mass of mercury to the receiving water will contribute to exceedances of the narrative toxicity objective and impacts on beneficial uses. Mercury has been detected in the Discharger's effluent at a maximum concentration of 0.0361 µg/L. The Discharger has the ability to implement source control measures within the community. Because the lower Feather River has been listed as an impaired water body for mercury, the discharge must not cause or contribute to increased mercury levels. The lower Feather River is listed in the 303(d) list for mercury based on fish tissue mercury levels. This Order includes a mercury mass limitation to restrict the WWTP discharge's contribution to mercury bioaccumulation in the lower Feather River.

The Regional Water Board recently completed a total maximum daily load (TMDL) for diazinon in the Sacramento and Feather Rivers and amended the Basin Plan to include diazinon waste load allocations and water quality objectives on 16 October 2003. The Basin Plan now contains water quality objectives for diazinon of 0.080 µg/L as a one-hour average and 0.050 µg/L as a four-day average for the Feather River from the fish barrier dam to the Sacramento River. The Basin Plan also states that "[c]*ompliance with water quality objectives, waste load allocations, and load allocations for diazinon in the Sacramento and Feather Rivers is required by June 30, 2008*" and "[t]*he waste load allocations for all NPDES-permitted discharges are the diazinon water quality objectives*."

E. Other Plans, Policies and Regulations

1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20005 *et seq*. (hereafter Title 27). The exemption, pursuant to Title 27 CCR Section 20090(a), is based on the following:

   a. The waste consists primarily of domestic sewage and treated effluent;

   b. The waste discharge requirements are consistent with water quality objectives; and

   c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act (CWA) and amendments thereto are applicable to the discharge.

The Federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., § 1311(b)(1)(C); 40 CFR, § 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR Section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that "*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality*." Federal Regulations, 40 CFR, §122.44(d)(1)(vi), further provide that "[w]*here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.*"

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 CFR §122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Regional Water Board's Basin Plan, page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives") that specifies that the Regional Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives*." This Policy complies with 40 CFR §122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including (1) EPA's published water quality criteria, (2) a proposed state criterion (*i.e*., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (*i.e*., the Regional Water Board's "Policy for Application of Water Quality Objectives")(40 CFR 122.44(d)(1) (vi) (A), (B) or (C)), or (3) an indicator parameter. The Basin Plan contains a narrative objective requiring that: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*" (narrative toxicity objective). The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The Basin Plan states that

material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs. When a reasonable potential exists for exceeding a narrative objective, Federal Regulations mandate numerical effluent limitations and the Basin Plan narrative criteria clearly establish a procedure for translating the narrative objectives into numerical effluent limitations.

A. **Discharge Prohibitions**

As stated in the Federal Standard Provisions (Attachment D), this Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR §122.41(m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the Federal Regulations, 40 CFR §122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Resources Control Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR §122.41(m), as allowing bypass only for essential maintenance to assure efficient operation. In the case of United States v. City of Toledo, Ohio (63 F. Supp 2d 834, N.D. Ohio 1999) the Federal Court ruled that "*any bypass which occurs because of inadequate plant capacity is unauthorized…to the extent that there are 'feasible alternatives', including the construction or installation of additional treatment capacity*."

The Federal CWA, Section 301, requires that not later than 1 July 1977, publicly owned wastewater treatment works meet effluent limitations based on secondary treatment or any more stringent limitation necessary to meet water quality standards. Federal Regulations, 40 CFR, Part 133, establish the minimum level of effluent quality attainable by secondary treatment for BOD, TSS, and pH. Tertiary treatment requirements for BOD and TSS are based on the technical capability of the process. BOD is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The solids content—suspended (TSS) and settleable (SS)—is also an important characteristic of wastewater. The secondary and tertiary treatment standards for BOD and TSS are indicators of the effectiveness of the treatment processes.

The principal infectious agents (pathogens) that may be present in raw sewage may be classified into three broad groups: bacteria, parasites, and viruses. Secondary treatment has been shown to be effective for pathogen removal. For additional pathogen reduction, tertiary treatment, consisting of chemical coagulation, sedimentation, and filtration, has been found to remove approximately 99.5% of viruses. Filtration is an effective means of reducing viruses and parasites from the waste stream.

A wet weather influent wastestream may contain significantly diluted levels of BOD and TSS. A bypassed diluted wastestream may have BOD and TSS levels that meet the secondary or tertiary objectives, either alone or when blended with treated wastewater. However, the bypassed wastestream would not have been treated to reduce pathogens or other individual pollutants. The indicator parameters of BOD and TSS cannot be diluted to a level that may indicate that adequate treatment has occurred as an alternative to providing appropriate treatment.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Regulations promulgated in 40 CFR §125.3(a)(1) require technology-based effluent limitations for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in Section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR §133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD, TSS, and pH.

40 CFR §133 allows for the adjustment of BOD and TSS limits for facilities that provide treatment equivalent to secondary treatment utilizing trickling filters or stabilization ponds as the principal method of treatment. The Discharger's WWTP uses a trickling filter as the principal treatment process. 40 CFR §133.105(a) and (b) require equivalent to secondary treatment systems to maintain an effluent quality of not more than 45 mg/L as a 30-day average and not more than 65 mg/L as a 7-day average for BOD and TSS. In addition, the 30-day average percent removal (concentration-based) of BOD and TSS is required not to fall below 65 percent. 40 CFR §133.105(c) requires that the pH requirements of 40 CFR §133.102(c) be met (*i.e.*, pH must be maintained between 6.0 and 9.0).

2. Applicable Technology-Based Effluent Limitations

Summary of Technology-based Effluent Limitations
Discharge Point EFF-001 and EFF-002

The Clean Water Act and Federal Regulations require that municipal wastewater be treated to "secondary" quality. Federal Regulations, 40 CFR 133, establish the

technology-based level of effluent quality achievable through secondary treatment. Discharge Limitations have been established for secondary treatment as 30 mg/L (30-day average) for both BOD and TSS and within the limits of 6.0 and 9.0 for pH. Federal regulations also establish relaxed "equivalent to secondary" discharge limitations as 45 mg/L (30-day average) and 65 mg/l (weekly average), based on the technical capability of pond treatment systems. Final discharge limitations in this Order are based on the technical capability of tertiary wastewater treatment systems. Technology based limitations are utilized to assure the treatment systems are properly designed and operated. Discharge Limitations have been established for tertiary treatment or equivalent as 10 mg/L (30-day average), 15 mg/L (weekly average) and 20 mg/L (daily maximum) for both BOD and TSS.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
5-Day BOD @ 20 °C	mg/L	45	65	--	--	--
	lbs/day[1]	680	980	--	--	--
Total Suspended Solids	mg/L	45	65	--	--	--
	lbs/day	680	980	--	--	--

1. Based on a design treatment capacity of 1.8 million gallons per day (mgd).

Parameter[1]	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
5-day BOD @ 20°C	mg/L	10	15	20	--	--
	lbs/day[2]	420	630	830	--	--
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day	420	630	830	--	--

1. Monitoring of EFF-002 for compliance with the effluent limitations is required until the treatment/disposal ponds located within the Feather River levees are permanently closed.
2. Based upon a design treatment capacity of 5.0 mgd.

C. Water Quality-Based Effluent Limitations

1. Scope and Authority

As specified in 40 CFR §122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or water quality criteria contained in the CTR and NTR.

2. **Applicable Beneficial Uses and Water Quality Criteria and Objectives**

   a. The receiving stream is the Feather River, which is tributary to the Sacramento River.

Discharge Point	Receiving Water Name	Beneficial Use(s)
EFF-001	Feather River	Existing: Municipal and domestic supply (MUN); agricultural irrigation (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD).
EFF-002	Groundwater	Existing: Municipal and domestic supply (MUN), industrial service supply (IND), industrial process supply (PROC), and agricultural supply (AGR).
	Feather River	Existing: Municipal and domestic supply (MUN); agricultural irrigation (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning, reproduction; and/or early development (SPWN); and wildlife habitat (WILD).

   b. ***Hardness***—While no Effluent Limitation for hardness is necessary in this Order, hardness is critical to the assessment of the need for, and the development of, Effluent Limitations for certain metals. The *California Toxics Rule*, at (c)(4), states the following:

      "Application of metals criteria. (i) *For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/L or less as calcium carbonate, the actual ambient hardness of the surface water shall be used in those equations*." [emphasis added]

      The State Water Resources Control Board, in footnote 19 to Water Quality Order No. 2004-0013, stated: "*We note that…the Regional Water Board…applied a variable hardness value whereby effluent limitations will vary depending on the actual, current hardness values in the receiving water. We recommend that the Regional Water Board establish either fixed or seasonal effluent limitations for metals, as provided in the SIP, rather than 'floating' effluent limitations*."

      Effluent Limitations for the discharge must be set to protect the beneficial uses

of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, "floating" effluent limitations that are reflective of actual conditions at the time of discharge, Effluent Limitations must be set using the worst-case condition (*e.g.*, lowest ambient hardness) in order to protect beneficial uses for all discharge conditions.

The United States Geological Survey (USGS) maintains flow- and water quality-monitoring stations on the Feather River at Gridley and on the Yuba River near Marysville. These two stations represent the nearest upstream, continuously operated monitoring stations. On 8 July 2003, at 12:30 p.m., a hardness value of 30 mg/L (as $CaCO_3$) was measured at the "Feather River at Gridley" station with a flow of 10149 cfs. On the same day, at noon, a hardness value of 32 mg/L (as $CaCO_3$) was measured at the "Yuba River near Marysville" station with a flow of 1516 cfs. The flow-weighted average hardness value is 30 mg/L (as $CaCO_3$). Both hardness values were determined using Standard Method 2340B. According to *Standard Methods for the Examination of Water and Wastewater*, "*Method 2340B, hardness by calculation, is applicable to all waters and yields the higher accuracy*."

3. **Determining the Need for WQBELs**

   a. Reasonable potential (RP) was determined by calculating the projected maximum effluent concentration (MEC) for each constituent and comparing it to applicable water quality standards; if a standard was exceeded, the discharge was determined to have reasonable potential to exceed a standard for that constituent. The projected MEC is determined by multiplying the observed MEC (the maximum detected concentration) by a factor that accounts for statistical variation. The multiplying factor is determined (for 99% confidence level and 99% probability basis) using the number of results available and the coefficient of variation (standard deviation divided by the mean) of the sample results. In accordance with the SIP, non-detect results were counted as one-half the detection level when calculating the mean and standard deviation. For all constituents for which the source of the applicable water quality standard is the CTR or NTR, the multiplying factor for determining reasonable potential is 1. Reasonable potential evaluation was based on the methods used in the SIP and the USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001].

   b. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the Regional Water Board finds that the discharge does have a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for aluminum, ammonia, bis-2(ethylhexyl) phthalate, chlorine, chloroform, chromium VI, cis-1,2-dichloroethene, copper, cyanide, diazinon, dibenzo(a,h)-anthracene, dichlorobromomethane, electrical conductivity, iron,

lead, manganese, MBAS, methoxychlor, nitrate plus nitrite, nitrite, organochlorine pesticides, pH, settleable solids, tetrachloroethene, thiobencarb, and zinc. Effluent limitations for these constituents are included in this Order.

c. USEPA established numeric criteria for priority toxic pollutants in the California Toxics Rule (CTR). The State Water Resources Control Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) to implement the CTR. The Regional Water Board's Basin Plan allows mixing zones provided the Discharger has demonstrated that the mixing zone will not adversely impact beneficial uses. The Basin Plan further requires that in determining the size of a mixing zone, the Regional Water Board will consider the applicable procedures in USEPA's *Water Quality Standards Handbook* and the *Technical Support Document for Water Quality Based Toxics Control* (TSD). It is the Regional Water Board's discretion whether to allow a mixing zone. The SIP, in part, states that mixing zones shall not:

- Compromise the integrity of the entire water body.
- Cause acutely toxic conditions to aquatic life passing through the mixing zone.
- Restrict passage of aquatic life.
- Adversely impact biologically sensitive or critical habitats, including but not limited to, habitat of species listed under Federal or State endangered species laws.
- Dominate the receiving water body.
- Overlap a mixing zone from a different outfall.

USEPA's *Water Quality Standards Handbook* (WQSH) states that States may, at their discretion, allow mixing zones. The WQSH recommends that mixing zones be defined on a case-by-case basis after it has been determined that the assimilative capacity of the receiving stream can safely accommodate the discharge. This assessment should take into consideration the physical, chemical, and biological characteristics of the discharge and the receiving stream; the life history of and behavior of organisms in the receiving stream; and the desired uses of the waters. Mixing zones should not be allowed where they may endanger critical areas (*e.g.,* drinking water supplies, recreational areas, breeding grounds and areas with sensitive biota). USEPA's TSD states, in part in Section 4.3.1, that mixing zones should not be permitted where they may endanger critical areas.

The Basin Plan, the SIP and U.S. EPA's TSD state that allowance of a mixing zone is discretional on the part of the Regional Board. Following meetings with Regional Water Board staff regarding the aquatic life beneficial uses of the receiving stream, the Discharger did not propose and this Order does not contain mixing zone allowances for constituents that are potentially toxic to aquatic life. If new information becomes available regarding assimilative capacity for aquatic life-based criteria, the Discharger requests the ability to

work with Regional Board staff on a re-opener of the permit with respect to aquatic life-based mixing zones at that time. Mixing zones are being considered for longer-term human health criteria that will not impact the critical fishery.

Mixing zones are being granted for longer-term human health criteria, on a pollutant-by-pollutant basis, where there is adequate assimilative capacity for the individual pollutant in the receiving stream. The mixing zone is being limited to the amount of assimilative capacity necessary to comply with discharge limitations and does not grant all of the assimilative capacity of the Feather River. In order to assure a small zone of initial dilution, the discharge shall be completely mixed within two river widths. Upon completion of construction of the effluent diffuser, monitoring will be required at the edge of the mixing zone, 600-feet downstream of the diffuser, to confirm compliance with the allowed mixing zone. There are no water intakes downstream of the discharge point within a distance that could be impacted by the proposed mixing zone. There are water intakes upstream of the discharge point, however flow reversals have not been observed or recorded for this reach of the Feather River.

Pollutants tend to concentrate as wastewater evaporates in pond systems. Since the wastewater treatment plant effluent has been shown to present a reasonable potential to exceed water quality standards and objectives, it is reasonable to assume that a concentrated pond effluent would present a greater potential to exceed water quality standards and objectives. Although there may be significant hydraulic dilution capacity from river flows during events when the ponds are discharging to the Feather River, there may be no assimilative capacity for individual pollutants. The wastewater discharge from the ponds to the Feather River presents a reasonable potential to exceed water quality standards and objectives for the same constituents identified in the wastewater treatment plant effluent. This Order contains Effluent Limitations for the wastewater discharge from the ponds, based on the reasonable potential analysis for the wastewater effluent prior to concentration in the ponds. Wastewater pond systems in the Central Valley also grow significant quantities of algae. In addition to the wastewater constituents, the pond discharge, in part due to significant algae growth, presents a reasonable potential to exceed Receiving Water Limitations for pH, turbidity, color, dissolved oxygen, settleable material, suspended material, and temperature. This Order contains Receiving Water Limitations based on compliance with water quality objectives contained in the Basin Plan.

The ponds are located within the floodplain levee of the Feather River and are not accessible during river high water stages. Federal Regulations, 40 CFR 122.41 (j)(1), require that facilities that discharge wastewater are required to evaluate compliance with the limitations established in an NPDES permit. Because the area is flooded, the Discharger is unable to safely monitor the ponds for compliance with limitations during periods of discharge to receiving waters. The Discharge has proposed to close the ponds during the

life of this Order, which will eliminate the reasonable potential to violate effluent and receiving water limitations from the pond discharge.

d. ***Aluminum***—Aluminum in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a level necessary to protect aquatic life, and, therefore to violate the Basin Plan's narrative toxicity objective. USEPA developed National Recommended Ambient Water Quality Criteria for protection of freshwater aquatic life for aluminum. The recommended four-day average (chronic) and one-hour average (acute) criteria for aluminum are 87 µg/L and 750 µg/L, respectively, for waters with a pH of 6.5 to 9.0. USEPA recommends that the ambient criteria are protective of the aquatic beneficial uses of receiving waters in lieu of site-specific criteria. The receiving stream has been measured to have a low hardness—typically between 30 and 45 mg/L as $CaCO_3$. This condition is supportive of the applicability of the ambient water quality criteria for aluminum, according to USEPA's development document. Applying 40 CFR §122.44(d)(1)(vi)(B), Effluent Limitations for aluminum are included in this Order and are based on USEPA's Ambient Water Quality Criteria for the protection of the beneficial use of freshwater aquatic habitat.

Aluminum was detected in an effluent sample collected 21 May 2002 at a concentration of 470 µg/L. The recommended continuous concentration (maximum four-day average concentration or CCC) is 87 µg/L and the recommended maximum concentration (maximum one-hour average concentration or CMC) is 750 µg/L. The projected MEC for aluminum is 1,120 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, effluent limitations for aluminum are required.

The USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001] contains statistical methods for converting chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

$$AMEL = 1.45\left[\min(0.376CMC, 0.584CCC)\right] = 74\ \mu g/L$$

$$MDEL = 2.66\left[\min\left(0.376CMC, 0.584CCC\right)\right] = 140\ \mu g/L$$

In USEPA's *Ambient Water Quality Criteria for Aluminum—1988* [EPA 440/5-86-008], USEPA states that "[a]*cid-soluble aluminum…is probably the best measurement at the present…*"; however, USEPA has not yet approved an acid-soluble test method for aluminum. Replacing the ICP/AES portion of the analytical procedure with ICP/MS would allow lower detection limits to be achieved. Based on USEPA's discussion of aluminum analytical methods, this Order allows the use of the alternate aluminum testing protocol described above to meet monitoring requirements.

This Order includes average monthly and maximum daily effluent limitations for aluminum.

e. ***Ammonia***—Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. The Discharger does not currently use nitrification to remove ammonia from the waste stream, but is proposing to upgrade to do so within the life of this permit. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. Discharges of ammonia would violate the Basin Plan narrative toxicity objective. Applying 40 CFR §122.44(d)(1)(vi)(B), it is appropriate to use USEPA's Ambient National Water Quality Criteria for the Protection of Freshwater Aquatic Life for ammonia, which was developed to be protective of aquatic organisms.

USEPA's *Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life*, for total ammonia, recommends acute (1-hour average; criteria maximum concentration) standards based on pH and chronic (30-day average, criteria continuous concentration) standards based on pH and temperature. It also recommends a maximum four-day average concentration of 2.5 times the criteria continuous concentration. USEPA found that as pH increased, both the acute and chronic toxicity of ammonia increased. Salmonids were more sensitive to acute toxicity effects than other species. However, while the acute toxicity of ammonia was not influenced by temperature, it was found that invertebrates and young fish experienced increasing chronic toxicity effects with increasing temperature. Because the Feather River has a beneficial use of cold freshwater habitat and the presence of salmonids and early fish life stages in the Feather River is well-documented, the recommended criteria for waters where salmonids and early life stages are present were used. USEPA's recommended criteria are show below:

$$CCC_{30-day} = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}} \right) \times MIN\left(2.85, 1.45 \cdot 10^{0.028(25-T)}\right), \text{ and}$$

$$CMC = \left(\frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}} \right),$$

where T is in degrees Celsius

The Basin Plan objective for pH in the receiving stream is the range of 6.5 to 8.5, but the maximum permitted effluent pH is 8.0 to accommodate the Discharger's request for a more stringent pH limit. The one-hour effluent ammonia limitation is a function of pH. Using a pH value of 8.0, the resulting average one-hour effluent ammonia limitation is 5.62 mg/L (as N). The average monthly effluent ammonia limitation is a function of both pH and temperature. The Discharger requested seasonal average monthly effluent

ammonia limitation and provided temperature data from January 2001 through May 2006 showing seasonal variation in both effluent and receiving water temperature. The maximum observed 30-day average effluent temperature from 1 April through 31 October was 77.4 ºF (25.2 ºC), for the 30-day periods ending 11, 12, and 13 July 2005. The maximum observed 30-day R-1 temperature from 1 April through 31 October was 70.5 ºF (21.4 ºC), for the 30-day periods ending 6, 7, 8, 9, and 10 July 2001. Using a pH value of 8.0 and the worst-case temperature value of 77.4 ºF (25.2 ºC) on a 30-day basis, the resulting effluent limitations for ammonia are 1.22 mg/L (as N) for the average monthly effluent limitation from 1 April through 31 October. The maximum observed 30-day average effluent temperature from 1 November through 31 March was 66.5 ºF (19.2 ºC), for the 30-day period ending 30 November 2005. The maximum observed 30-day R-1 temperature from 1 November through 31 March was 66.5 ºF (19.2 ºC) for the 30-day periods ending 28, 29, 30, and 31 March 2003. Using a pH value of 8.0 and the worst-case temperature value of 66.5 ºF (19.2 ºC) on a 30-day basis, the resulting effluent limitations are 1.80 mg/L (as N) for the average monthly effluent limitation and 5.62 mg/L (as N) for the average one-hour effluent limitation. Effluent Limitations for ammonia are included in this Order to assure the treatment process adequately nitrifies the waste stream to protect the aquatic habitat beneficial uses.

A 30-day period is a reasonable representation of a calendar month; so, to conform to 40 CFR §122.45, the 30-day average criteria are set equal to average monthly limitations in this Order.

f. ***Bis (2-ethylhexyl) phthalate***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the NTR criteria for bis (2-ethylhexyl) phthalate. The NTR includes a bis (2-ethylhexyl) phthalate criterion of 1.8 µg/L for the protection of human health, based on a one-in-a-million cancer risk for waters from which both water and aquatic organisms are consumed. Bis (2-ethylhexyl) phthalate was detected in an effluent sample collected 11 August 2004 at a concentration of 22 µg/L. The projected MEC for bis (2-ethylhexyl) phthalate is 22 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, Effluent Limitations for bis (2-ethylhexyl) phthalate are required.

The Linda County Water District WWTP data set for the upstream receiving water was augmented with Yuba City wastewater treatment facility (WWTF) R-1 data for determining the available assimilative capacity, as shown below. Since the Linda County Water District WWTP has not been directly discharging to the Feather River, the Yuba City WWTF R-1 data are also considered representative of the quality of the Feather River upstream of the Linda County Water District WWTP.

Date	Location	Result (µg/L)
23 September 1993	Yuba City WWTF R-1	<0.4
23 January 2002	Linda Co. Water Dist. R-1	<4.8
30 January 2002	Yuba City WWTF R-1	<4.8
8 April 2002	Linda Co. Water Dist. R-1	<2
8 April 2002	Yuba City WWTF R-1	<3.6
1 July 2002	Linda Co. Water Dist. R-1	<2
2 July 2002	Yuba City WWTF R-1	<2
7 October 2002	Linda Co. Water Dist. R-1	<2
7 October 2002	Yuba City WWTF R-1	**10**
15 April 2005	Linda Co. Water Dist. R-1	<0.47
	Arithmetic Mean (average):	3.2

The arithmetic mean of the receiving water bis (2-ethylhexyl) phthalate concentrations is 3.2 µg/L. Both the effluent and receiving water concentrations have exceeded the criterion; therefore, there is no assimilative capacity for bis (2-ethylhexyl) phthalate and the NTR criterion must be met at the point of discharge. Effluent Limitations for bis (2-ethylhexyl) phthalate are included in this Order and are based on the NTR criterion for the protection of human health.

The AMEL was set equal to the standard of 1.8 µg/L and the MDEL was calculated as follows:

$$MDEL = \left(\frac{3.98}{1.74}\right) AMEL = 4.1\,\mu g/l$$

Where: AMEL = average monthly effluent limitation
MDEL = maximum daily effluent limitation

This Order includes average monthly and maximum daily effluent limitations for bis (2-ethylhexyl) phthalate.

g. ***BOD and TSS—***40 CFR §133.102 contains regulations describing the minimum level of effluent quality—for biochemical oxygen demand (BOD) and total suspended solids (TSS)—attainable by secondary treatment.

The Discharger has proposed upgrading the existing WWTP to provide tertiary, or equivalent, treatment. The WWTP is required to comply with effluent limitations appropriate for treatment systems providing tertiary or equivalent treatment. Effluent limitations for both BOD and TSS have been established at 10 mg/L, as a 30-day average, which is technically based on the capability of a tertiary system. In addition, 40 CFR §133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. If 85 percent removal of BOD and TSS must be achieved by a secondary treatment plant, it must also be achieved by a tertiary (*i.e.*, treatment beyond secondary level)

treatment plant. This Order contains a limitation requiring an average of 85 percent removal of BOD and TSS over each calendar month.

h. ***Chlorine***—The Discharger currently uses chlorine for disinfection of the effluent waste stream and plans to continue this practice when the WWTP is upgraded and expanded. Chlorine can cause toxicity to aquatic organisms when discharged to surface waters. USEPA recommends, in its Ambient Water Quality Criteria for the protection of fresh water aquatic life, maximum 1-hour average and 4-day average chlorine concentrations of 0.019 mg/L and 0.011 mg/L, respectively. The use of chlorine as a disinfectant presents a reasonable potential that it could be discharged in toxic concentrations. Effluent Limitations for chlorine have been included in this Order to protect the receiving stream aquatic life beneficial uses. Effluent Limitations have been established based on the ambient water quality criteria for chlorine.

   Because chlorine is a toxic constituent that can be and will be monitored continuously, an average one-hour limitation is considered more appropriate than an average daily limitation. Average one-hour and four-day limitations for chlorine, based on these criteria, are included in this Order.

i. ***Chloroform***—The Basin Plan contains the *Policy for Application of Water Quality Objectives*, which provides that narrative objectives may be translated using numerical limits published by other agencies and organizations. The California Environmental Protection Agency (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) has published the Toxicity Criteria Database, which contains cancer potency factors for chemicals, including chloroform, that have been used as a basis for regulatory actions by the boards, departments and offices within Cal/EPA. The OEHHA cancer potency value for oral exposure to chloroform is 0.031 milligrams per kilogram body weight per day (mg/kg-day). By applying standard toxicologic assumptions used by OEHHA and USEPA in evaluating health risks via drinking water exposure of 70 kg body weight and two liters per day water consumption, this cancer potency factor is equivalent to a concentration in drinking water of 1.1 µg/L (ppb) at the one-in-a-million cancer risk level. This risk level is consistent with that used by the Department of Health Services (DHS) to set *de minimis* risks from involuntary exposure to carcinogens in drinking water in developing MCLs and Action Levels and by OEHHA to set negligible cancer risks in developing Public Health Goals for drinking water. The one-in-a-million cancer risk level is also mandated by USEPA in applying human health protective criteria contained in the NTR and the CTR to priority toxic pollutants in California surface waters.

   The observed chloroform MEC was detected in an effluent sample collected 11 August 2004 at a concentration of 4.9 µg/L. Using the reasonable potential analysis procedure described above, the projected chloroform MEC is 26 µg/L. The equivalent concentration for the OEHHA cancer potency factor is 1.1 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, an Effluent Limitation for chloroform is required.

The Linda County Water District WWTP data set for the upstream receiving water was augmented with Yuba City WWTF R-1 data for determining the available assimilative capacity, as shown below. Since the Linda County Water District WWTP has not been directly discharging to the Feather River, the Yuba City WWTF R-1 data are also considered representative of the quality of the Feather River upstream of the Linda County Water District WWTP.

Date	Location	Result (µg/L)
23 September 1993	Yuba City WWTF R-1	<0.5
23 January 2002	Linda Co. Water Dist. R-1	<0.16
30 January 2002	Yuba City WWTF R-1	<0.07
7 February 2002	Yuba City WWTF R-1	<0.1
12 February 2002	Linda Co. Water Dist. R-1	<0.16
4 March 2002	Linda Co. Water Dist. R-1	<0.16
11 March 2002	Yuba City WWTF R-1	<0.07
8 April 2002	Linda Co. Water Dist. R-1	<0.16
8 April 2002	Yuba City WWTF R-1	<0.07
6 May 2002	Yuba City WWTF R-1	<0.07
21 May 2002	Linda Co. Water Dist. R-1	<0.07
17 June 2002	Linda Co. Water Dist. R-1	<0.07
17 June 2002	Yuba City WWTF R-1	<0.07
1 July 2002	Linda Co. Water Dist. R-1	<0.07
2 July 2002	Yuba City WWTF R-1	<0.07
5 August 2002	Linda Co. Water Dist. R-1	<0.07
6 August 2002	Yuba City WWTF R-1	<0.07
16 September 2002	Linda Co. Water Dist. R-1	<0.07
25 September 2002	Yuba City WWTF R-1	<0.07
7 October 2002	Linda Co. Water Dist. R-1	<0.07
7 October 2002	Yuba City WWTF R-1	<0.07
4 November 2002	Linda Co. Water Dist. R-1	<0.07
4 November 2002	Yuba City WWTF R-1	<0.07
2 December 2002	Linda Co. Water Dist. R-1	<0.07
9 December 2002	Yuba City WWTF R-1	<0.07
	Lowest Detection Level:	0.07

No chloroform has been detected in the receiving water. The lowest detection level of the receiving water chloroform concentrations is 0.07 µg/L; assimilative capacity for chloroform is available.

$$ECA_{HH} = HH + D_{HH}\left(HH - B_{HH}\right)$$
$$ECA_{HH} = 1.1 + 1928(1.1 - 0.07) = 2{,}000 \mu g / l$$

The Discharger has not requested the use of more assimilative capacity than is needed for its discharge to comply. The average monthly effluent limitation, therefore, was set at the projected chloroform MEC of 26 µg/L.

This Order includes an average monthly chloroform limitation, based on the Basin Plan toxicity objective and OEHHA Toxicity Criteria for the protection of human health.

j. ***Chromium VI (Hexavalent Chromium)***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for chromium VI. The CTR includes maximum 1-hour average and 4-day average total recoverable chromium VI concentrations of 16 µg/L and 11 µg/L, respectively, for the protection of freshwater aquatic life.

The observed chromium VI MEC was detected in an effluent sample collected 11 August 2005 at a concentration of 23 µg/L. The projected maximum effluent chromium VI concentration is 23 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, Effluent Limitations for chromium VI are required. Effluent Limitations for chromium VI are included in this Order and are based on CTR standards for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

CCC = 11 µg/L *CMC* = 16 µg/L

$$AMEL = 1.55\left[\min(0.321CMC, 0.527CCC)\right] = 8.1 \text{ µg/L}$$

$$MDEL = 3.11\left[\min\left(0.321CMC, 0.527CCC\right)\right] = 16 \text{ µg/L}$$

This Order includes average monthly and maximum daily effluent limitations for chromium VI.

k. ***Copper***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for copper. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. The criteria for copper are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The conversion factors for copper in freshwater are 0.960 for both the acute and the chronic criteria.

The observed copper MEC was detected in a sample collected 8 April 2002 at a concentration of 19 µg/L. The projected copper MEC is 19 µg/L. Using the worst-case ambient (lowest upstream receiving water) measured hardness from the effluent and receiving water (30 mg/L), the applicable chronic criterion (maximum four-day average concentration) is 3.3 µg/L and the applicable acute criterion (maximum one-hour average concentration) is 4.5 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, Effluent Limitations for copper are required. The Discharger has not requested a mixing zone or use of assimilative capacity for effluent limitations based on

protection of aquatic life. The Effluent Limitations for copper included in this Order are presented in total recoverable concentrations, and are based on CTR standards for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

$$CCC = e^{[0.8545\ln(hardness)-1.702]} = 3.3\ \mu g/L$$
$$CMC = e^{[0.9422\ln(hardness)-1.700]} = 4.5\ \mu g/L$$
$$AMEL = 1.49[\min(0.354CMC, 0.563CCC)] = 2.4\ \mu g/L$$
$$MDEL = 2.82[\min(0.354CMC, 0.563CCC)] = 4.5\ \mu g/L$$

This Order includes average monthly and maximum daily effluent copper limitations.

l. ***Cyanide***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR standards for cyanide. The CTR includes maximum 1-hour average and 4-day average cyanide concentrations of 22 µg/L and 5.2 µg/L, respectively, for the protection of freshwater aquatic life.

The observed cyanide MEC was detected in an effluent sample collected 24 October 2000 at a concentration of 38 µg/L. The projected cyanide MEC is 38 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, Effluent Limitations for cyanide are required. Effluent Limitations for cyanide are included in this Order and are based on CTR standards for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

CCC = 5.2 µg/L *CMC* = 22 µg/L
$$AMEL = 1.55[\min(0.321CMC, 0.527CCC)] = 4.3\ \mu g/L$$
$$MDEL = 3.11[\min(0.321CMC, 0.527CCC)] = 8.5\ \mu g/L$$

This Order includes average monthly and maximum daily effluent cyanide limitations.

m. ***Diazinon***—The discharge has reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan objectives for diazinon. There are currently no CTR or NTR criteria for this constituent. The Regional Water

Board recently completed a total maximum daily load (TMDL) for diazinon in the Sacramento and Feather Rivers and amended the Basin Plan to include diazinon waste load allocations and water quality objectives on 16 October 2003. The Basin Plan now contains water quality objectives for diazinon of 0.080 µg/L as a one-hour average and 0.050 µg/L as a four-day average for the Feather River from the fish barrier dam to the Sacramento River. The Basin Plan also states that "[c]*ompliance with water quality objectives, waste load allocations, and load allocations for diazinon in the Sacramento and Feather Rivers is required by June 30, 2008*" and "[t]*he waste load allocations for all NPDES-permitted discharges are the diazinon water quality objectives*." The discharge has the reasonable potential to cause or contribute to an excursion above the Basin Plan objective for diazinon in the lower Feather River. Effluent Limitations for diazinon are included in this Order and are based on the Basin Plan objectives and waste load allocation.

The observed diazinon MEC was detected in an effluent sample collected 7 October 2002 at a concentration of 0.36 µg/L. The projected diazinon MEC is 1.7 µg/L. The observed and projected MECs are greater than the Basin Plan objective and waste load allocation; therefore, Effluent Limitations for diazinon are required. Effluent Limitations for diazinon are included in this Order and are based on Basin Plan objectives and waste load allocation for the protection of freshwater aquatic life.

The USEPA Technical Support Document for Water Quality-based Toxics Control recommends converting chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

$$AMEL = 1.55\left[\min(0.321MC, 0.527CCC)\right] = 0.040 \text{ µg/L}$$

$$MDEL = 3.11\left[\min\left(0.321CMC, 0.527CCC\right)\right] = 0.080 \text{ µg/L}$$

This Order includes average monthly and maximum daily effluent diazinon limitations.

n. ***Dibenzo(a,h)anthracene***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for dibenzo(a,h)anthracene. The CTR includes a dibenzo(a,h)anthracene criterion of 0.0044 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed.

The observed effluent dibenzo(a,h)anthracene MEC was detected in a sample collected 8 April 2002 at a concentration of 0.11 µg/L. The projected dibenzo(a,h)anthracene MEC is 0.11 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, Effluent Limitations for

dibenzo(a,h)anthracene are required.
The Linda County Water District WWTP data set for the upstream receiving water was augmented with Yuba City WWTF R-1 data for determining the available assimilative capacity, as shown below. Since the Linda County Water District WWTP has not been directly discharging to the Feather River, the Yuba City WWTF R-1 data are also considered representative of the quality of the Feather River upstream of the Linda County Water District WWTP.

Date	Location	Result (µg/L)
23 September 1993	Yuba City WWTF R-1	<3.6
23 January 2002	Linda Co. Water Dist. R-1	<0.53
30 January 2002	Yuba City WWTF R-1	<3.6
8 April 2002	Linda Co. Water Dist. R-1	<0.04
8 April 2002	Yuba City WWTF R-1	<0.04
1 July 2002	Linda Co. Water Dist. R-1	<0.04
2 July 2002	Yuba City WWTF R-1	<0.04
7 October 2002	Linda Co. Water Dist. R-1	<0.04
7 October 2002	Yuba City WWTF R-1	<0.038
	Lowest Detection Level:	0.038

No dibenzo(a,h)anthracene has been detected in the ambient receiving water. The lowest detection level of the receiving water dibenzo(a,h)anthracene concentrations is 0.038 µg/L; since the lowest detection level is greater than the criterion, no assimilative capacity for dibenzo(a,h)anthracene is available.

The AMEL was set equal to the standard of 0.0044 µg/L and the MDEL was calculated as follows:

$$MDEL = \left(\frac{3.11}{1.55}\right) AMEL = 0.0088\ \mu g / l$$

Where: AMEL = average monthly effluent limitation
MDEL = maximum daily effluent limitation

This Order includes average monthly and maximum daily effluent dibenzo(a,h)anthracene limitations.

o. ***Dichlorobromomethane***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR standards for dichlorobromomethane. The CTR includes a dichlorobromomethane criterion of 0.56 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed. Dichlorobromomethane was detected in an effluent sample collected 11 August 2004 at a concentration of 1.1 µg/L. The projected dichlorobromomethane MEC for the purpose of determining reasonable potential is 1.1 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, Effluent Limitations for dichlorobromomethane

are required. Effluent Limitations for dichlorobromomethane are included in this Order and are based on the CTR standard for the protection of human health.

The Linda County Water District WWTP data set for the upstream receiving water was augmented with Yuba City WWTF R-1 data for determining the available assimilative capacity, as shown below. Since the Linda County Water District WWTP has not been directly discharging to the Feather River, the Yuba City WWTF R-1 data are also considered representative of the quality of the Feather River upstream of the Linda County Water District WWTP.

Date	Location	Result (µg/L)
23 September 1993	Yuba City WWTF R-1	<0.5
23 January 2002	Linda Co. Water Dist. R-1	<0.23
30 January 2002	Yuba City WWTF R-1	<0.05
7 February 2002	Yuba City WWTF R-1	<0.1
12 February 2002	Linda Co. Water Dist. R-1	<0.23
4 March 2002	Linda Co. Water Dist. R-1	<0.23
11 March 2002	Yuba City WWTF R-1	<0.05
8 April 2002	Linda Co. Water Dist. R-1	<0.23
8 April 2002	Yuba City WWTF R-1	<0.05
6 May 2002	Yuba City WWTF R-1	<0.05
21 May 2002	Linda Co. Water Dist. R-1	<0.05
17 June 2002	Linda Co. Water Dist. R-1	<0.05
17 June 2002	Yuba City WWTF R-1	<0.05
1 July 2002	Linda Co. Water Dist. R-1	<0.05
2 July 2002	Yuba City WWTF R-1	<0.05
5 August 2002	Linda Co. Water Dist. R-1	<0.05
6 August 2002	Yuba City WWTF R-1	<0.05
16 September 2002	Linda Co. Water Dist. R-1	<0.05
25 September 2002	Yuba City WWTF R-1	<0.05
7 October 2002	Linda Co. Water Dist. R-1	<0.05
7 October 2002	Yuba City WWTF R-1	<0.05
4 November 2002	Linda Co. Water Dist. R-1	<0.05
4 November 2002	Yuba City WWTF R-1	<0.05
2 December 2002	Linda Co. Water Dist. R-1	<0.05
9 December 2002	Yuba City WWTF R-1	<0.05
	Lowest Detection Level:	0.05

No dichlorobromomethane has been detected in the receiving water. The lowest detection level of the receiving water dichlorobromomethane concentrations is 0.05 µg/L; assimilative capacity for dichlorobromomethane is available.

$$ECA_{HH} = HH + D_{HH}\left(HH - B_{HH}\right)$$
$$ECA_{HH} = 0.56 + 1928\left(0.56 - 0.05\right) = 980 \mu g / l$$

Using a multiplier to project the MEC with a 99% confidence level and 99% probability basis (see WQBEL Calculations IV.C.4.d for procedure), the projected dichlorobromomethane MEC for the purpose of calculating effluent limitations is 2.6 µg/L. The Discharger has not requested the use of more assimilative capacity than is needed for its discharge to comply. The average monthly effluent limitation, therefore, was set at 2.6 µg/L.

With the AMEL set equal to 2.6 µg/L, the MDEL was calculated as follows:

$$MDEL = \left(\frac{3.11}{1.55}\right) AMEL = 5.3\,\mu g / l$$

Where: AMEL = average monthly effluent limitation
MDEL = maximum daily effluent limitation

This Order includes average monthly and maximum daily effluent limitations for dichlorobromomethane.

p. ***cis-1,2-Dichloroethene***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Maximum Contaminant Level (MCL) for cis-1,2-dichloroethene. The Primary MCL is 6 µg/L. Cis-1,2-dichloroethene was detected in an effluent sample collected 4 March 2002 at a concentration of 2.8 µg/L. The projected cis-1,2-dichloroethene MEC is 17 µg/L. The projected MEC exceeds the water quality standard; therefore, an Effluent Limitation for cis-1,2-dichloroethene is required. An Effluent Limitation for cis-1,2-dichloroethene is included in this Order and is based on the Basin Plan water quality objectives for chemical constituents, the California Department of Health Services Primary MCL, and consideration of available assimilative capacity.

The Linda County Water District WWTP data set for the upstream receiving water was augmented with Yuba City WWTF R-1 data for determining the available assimilative capacity, as shown below. Since the Linda County Water District WWTP has not been directly discharging to the Feather River, the Yuba City WWTF R-1 data are also considered representative of the quality of the Feather River upstream of the Linda County Water District WWTP.

Date	Location	Result (µg/L)
23 January 2002	Linda Co. Water Dist. R-1	<0.18
30 January 2002	Yuba City WWTF R-1	<0.09
7 February 2002	Yuba City WWTF R-1	<0.09
12 February 2002	Linda Co. Water Dist. R-1	<0.18
4 March 2002	Linda Co. Water Dist. R-1	<0.18
11 March 2002	Yuba City WWTF R-1	<0.09
8 April 2002	Linda Co. Water Dist. R-1	<0.18
8 April 2002	Yuba City WWTF R-1	<0.09
6 May 2002	Yuba City WWTF R-1	<0.09
21 May 2002	Linda Co. Water Dist. R-1	<0.09
17 June 2002	Linda Co. Water Dist. R-1	<0.09
17 June 2002	Yuba City WWTF R-1	<0.09
1 July 2002	Linda Co. Water Dist. R-1	<0.09
2 July 2002	Yuba City WWTF R-1	<0.09
5 August 2002	Linda Co. Water Dist. R-1	<0.09
6 August 2002	Yuba City WWTF R-1	<0.09
16 September 2002	Linda Co. Water Dist. R-1	<0.09
25 September 2002	Yuba City WWTF R-1	<0.09
7 October 2002	Linda Co. Water Dist. R-1	<0.09
7 October 2002	Yuba City WWTF R-1	<0.09
4 November 2002	Linda Co. Water Dist. R-1	<0.09
4 November 2002	Yuba City WWTF R-1	<0.09
2 December 2002	Linda Co. Water Dist. R-1	<0.09
9 December 2002	Yuba City WWTF R-1	<0.09
	Lowest Detection Level:	0.09

No cis-1,2-dichloroethene has been detected in the receiving water. The lowest detection level of the receiving water cis-1,2-dichloroethene concentrations is 0.09 µg/L; assimilative capacity for cis-1,2-dichloroethene is available.

$$ECA_{HH} = HH + D_{HH}\left(HH - B_{HH}\right)$$
$$ECA_{HH} = 6 + 1928\left(6 - 0.09\right) = 10{,}000 \mu g / l$$

The Discharger has not requested the use of more assimilative capacity than is needed for its discharge to comply. The average monthly effluent limitation, therefore, was set at 17 µg/L.

This Order includes average monthly effluent limitations for cis-1,2-dichloroethene.

q. Electrical Conductivity—The Basin Plan includes a water quality objective that electrical conductivity (at 25ºC) "[s]*hall not exceed 150 micromhos/cm (90 percentile) in well-mixed waters of the Feather River*." One of the water bodies to which this objective applies is the Feather River from the Fish Barrier Dam at Oroville to the Sacramento River. Electrical conductivity in the

discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan objective for electrical conductivity in the Feather River. An Effluent Limitation for electrical conductivity is included in this Order and is based on the Basin Plan objective for electrical conductivity in the Feather River and consideration of available assimilative capacity.

The maximum 30-day 90th percentile effluent and receiving water (R-1) electrical conductivity concentrations for the period beginning 1 January 2001 and ending 31 August 2005 were 777 µmhos/cm and 146 µmhos/cm, respectively. The human health dilution ratio (described in WQBEL Calculations IV.C.4.d on page 63) is appropriate to use because it applies to criteria that are applicable over longer time periods than the toxicity dilution ratios.

Yuba City's WWTP discharge consumes a portion of the EC dilution available in the Feather River. WDRs Order No. R5-2003-0085 permits Yuba City's WWTP to discharge up to 7.0 mgd of effluent with a maximum allowable EC concentration of 830 µmhos/cm to the Feather River. Using a mass balance, the 90th percentile EC of the Feather River would be 149.42 µmhos/cm.

$$EC = ((EC_{Linda}Q_{Linda}) + (EC_{Yuba\ City}Q_{Yuba\ City}) + (EC_{Feather\ River}Q_{Feather\ River}))/(Q_{Linda} + Q_{Yuba} + Q_{Feather})$$

$$149.42\ \underline{\mu mhos/cm} = ((780\ \underline{\mu mhos/cm} \times 5.0\ mgd) + (830\ \underline{\mu mhos/cm} \times 7.0\ mgd) + (146\ \underline{\mu mhos/cm} \times 2318\ mgd))/(5.0mgd + 7.0\ mgd + 2318\ mgd)$$

This Order includes a maximum 30-day 90th percentile Effluent Limitation for electrical conductivity of 780 µmhos/cm that is based upon the WWTP's 30-day 90th percentile effluent electrical conductivity concentration.

This Order grants the remainder of the EC assimilative capacity of the Feather River to this discharge. Redistribution of EC allocation for discharges to the Feather River may be considered when this Order is renewed or reopened.

r. ***Flow—***The existing WWTP was designed to provide a secondary level of treatment for its average dry weather design flow of 1.8 mgd. The average dry weather effluent flow limit for the existing WWTP is therefore set at 1.8 mgd.

The new WWTP will be designed to provide a tertiary or equivalent level of treatment for its average dry weather design flow of 5.0 mgd. The average dry weather effluent flow limit for the new WWTP is therefore set at 5.0 mgd.

s. ***Iron***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Secondary Maximum Contaminant Level (MCL)-Consumer Acceptance Limit for iron of 300 µg/L.

The observed iron MEC was detected in an effluent sample collected 31 May 2000 at a concentration of 275 µg/L. The projected maximum effluent

iron concentration is 466 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, an Effluent Limitation for iron is required. The maximum observed upstream receiving water iron concentration was 500 µg/L, from a sample collected on 21 May 2002; therefore, there is no assimilative capacity for iron in the receiving stream at the point of discharge. An Effluent Limitation for iron is included in this Order and is based on the Basin Plan water quality objectives for chemical constituents and color and the DHS Secondary MCL.

This Order includes an average monthly Effluent Limitation for iron that is equal to the secondary maximum contaminant level.

t. ***Lead***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR standards for lead. The CTR includes hardness-dependent standards for the protection of freshwater aquatic life for lead. The standards for metals are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The conversion factors for lead in freshwater are 1.46203-[0.145712 X ln(hardness)] for both the acute and the chronic criteria. The observed lead MEC was detected in an effluent sample collected 21 May 2002 at a concentration of 1.0 µg/L. The projected lead MEC is 1.0 µg/L. Using the worst-case ambient (lowest upstream receiving water) measured hardness from the effluent and receiving water (30 mg/L), the applicable chronic criterion (maximum four-day average concentration) is 0.69 µg/L and the applicable acute criterion (maximum one-hour average concentration) is 18 µg/L. The observed and projected MECs are greater than the water quality criteria and Effluent Limitations for lead are required. The Effluent Limitations for lead included in this Order are presented in total recoverable concentrations, and are based on the CTR standards for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

$$CCC = e^{[1.273\ln(hardness)-4.705]} = 0.69\ \mu g/L$$
$$CMC = e^{[1.273\ln(hardness)-1.460]} = 18\ \mu g/L$$
$$AMEL = 2.48[\min(0.137CMC, 0.250CCC)] = 0.43\ \mu g/L$$
$$MDEL = 7.28[\min(0.137CMC, 0.250CCC)] = 1.2\ \mu g/L$$

This Order includes average monthly and maximum daily effluent lead limitations.

u. ***Manganese***—The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Secondary Maximum Contaminant Level

(MCL)-Consumer Acceptance Limit of 50 µg/L for manganese.

The observed manganese MEC was detected in an effluent sample collected 12 February 2002 at a concentration of 3,200 µg/L. The projected manganese MEC is 10,654 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, an Effluent Limitation for manganese is required. The maximum observed upstream receiving water manganese concentration was 75 µg/L, from a sample collected on 4 November 2002; there is no assimilative capacity for manganese in the receiving stream at the point of discharge. An Effluent Limitation for manganese is included in this Order and is based on the Basin Plan water quality objectives for chemical constituents, color, and tastes and odors and the DHS Secondary MCL.

This Order includes an average monthly Effluent Limitation for manganese that is equal to the Secondary MCL.

v. ***Mercury***—The current USEPA Ambient Water Quality Criteria for Protection of Freshwater Aquatic Life, continuous concentration, for mercury is 0.77 µg/L (30-day average, chronic criteria). The CTR contains a human health criterion (based on a one-in-a-million cancer risk) of 0.050 µg/L for waters from which both water and aquatic organisms are consumed. In 40 CFR Part 131, USEPA acknowledges that the human health criteria may not be protective of some aquatic or endangered species and that "…*more stringent mercury limits may be determined and implemented through use of the State's narrative criterion.*" Both values are controversial and subject to change. In the CTR, USEPA reserved the mercury criteria for freshwater and aquatic life and may adopt new criteria at a later date. The observed mercury MEC was 0.0361 µg/L. The lower Feather River has been listed as an impaired water body pursuant to Section 303(d) of the CWA because of mercury. The beneficial use of fish consumption has been impaired due to bioaccumulation of mercury in fish tissue. Mercury bioaccumulates in fish tissue and, therefore, discharge of mercury to the receiving water is likely to contribute to exceedances of the narrative toxicity objective and impacts on beneficial uses. Because the lower Feather River has been listed as an impaired water body for mercury, the discharge must not cause or contribute to increased mercury levels. The SIP, Section 1.3, requires the establishment of an effluent limitation for a constituent when the receiving stream background water quality exceeds an applicable criterion or objective if the constituent is detected in the discharge. This Order also contains an interim performance-based mass Effluent Limitation of 0.016 lbs/month for mercury for the effluent discharge to the Feather River. This limitation is based on maintaining the mercury loading at the current level until a total maximum daily load (TMDL) can be established and USEPA develops mercury standards that are protective of human health. The mass limitation was derived using the observed mercury MEC and the reported average daily effluent flow rate. Compliance time schedules have not been included since the discharge currently meets the concentration based limitation and the mass limitation can be met through implementation measures and/or by limiting new sewer discharges containing mercury concentrations.

Effluent mass loading mercury limitations have been included in this Order and are based on current treatment plant performance and flow.

w. Methoxychlor—USEPA developed National Recommended Ambient Water Quality Criteria for protection of freshwater aquatic life for methoxychlor. The recommended instantaneous maximum for methoxychlor is 0.03 µg/L. Methoxychlor was detected in an effluent sample collected 8 April 2002 at a concentration of 0.093 µg/L. This result was reported by the analytical laboratory as an estimated concentration (J flag). The concentration fell below the reporting limit (lowest quantifiable concentration) of 0.51 µg/L, but exceeded the method detection limit of 0.017 µg/L. The result for the method blank for this analysis was non-detect. The projected methoxychlor MEC is 0.36 µg/L. The observed and projected MECs are greater than the water quality criteria and effluent limitations for methoxychlor are required.

Methoxychlor in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a level necessary to protect aquatic life, and, therefore to violate the Basin Plan's narrative toxicity objective. Applying 40 CFR §122.44(d)(1)(vi)(B), Effluent Limitations for methoxychlor are included in this Order and are based on USEPA's Ambient Water Quality Criteria for the protection of the beneficial use of freshwater aquatic habitat.

This Order includes instantaneous maximum effluent limitations for methoxychlor.

x. ***Methylene blue active substances (MBAS)***—The Secondary Maximum Contaminant Level (MCL)-Consumer Acceptance Limit of for foaming agents (MBAS) is 500 µg/L. MBAS was detected in an effluent sample collected 6 May 2002 at a concentration of 6,600 µg/L. Using the reasonable potential analysis procedure described above, the projected MBAS MEC is 25,198 µg/L. The observed and projected MECs are greater than the water quality standard; therefore, MBAS in the discharge have a reasonable potential to cause or contribute to an in-stream excursion above and an Effluent Limitation for MBAS is required. Effluent Limitations for MBAS are included in this Order and are based on protection of the Basin Plan water quality objectives for chemical constituents, floating material, and tastes and odors and the DHS Secondary MCL.

The Linda County Water District WWTP data set for the upstream receiving water was augmented with Yuba City WWTF R-1 data for determining the available assimilative capacity, as shown below. Since the Linda County Water District WWTP has not been directly discharging to the Feather River, the Yuba City WWTF R-1 data are also considered representative of the quality of the Feather River upstream of the Linda County Water District WWTP.

Date	Location	Result (µg/L)
23 January 2002	Linda Co. Water Dist. R-1	<37
30 January 2002	Yuba City WWTF R-1	<50
12 February 2002	Linda Co. Water Dist. R-1	<37
4 March 2002	Linda Co. Water Dist. R-1	<37
11 March 2002	Yuba City WWTF R-1	**120**
8 April 2002	Linda Co. Water Dist. R-1	<37
8 April 2002	Yuba City WWTF R-1	<50
6 May 2002	Yuba City WWTF R-1	<50
21 May 2002	Linda Co. Water Dist. R-1	<37
17 June 2002	Linda Co. Water Dist. R-1	<37
17 June 2002	Yuba City WWTF R-1	<50
1 July 2002	Linda Co. Water Dist. R-1	<37
2 July 2002	Yuba City WWTF R-1	<50
5 August 2002	Linda Co. Water Dist. R-1	<20
6 August 2002	Yuba City WWTF R-1	<50
25 September 2002	Yuba City WWTF R-1	<50
7 October 2002	Linda Co. Water Dist. R-1	<20
7 October 2002	Yuba City WWTF R-1	<50
4 November 2002	Linda Co. Water Dist. R-1	<20
4 November 2002	Yuba City WWTF R-1	<50
2 December 2002	Linda Co. Water Dist. R-1	<20
9 December 2002	Yuba City WWTF R-1	<50
Maximum Detected Concentration:		120

The maximum observed upstream receiving water MBAS concentration was 120 µg/L; assimilative capacity for MBAS is available.

$$ECA_{HH} = HH + D_{HH}\left(HH - B_{HH}\right)$$
$$ECA_{HH} = 500 + 1928\left(500 - 120\right) = 700{,}000\,\mu g/l$$

The Discharger has not requested the use of more assimilative capacity than is needed for its discharge to comply. The average monthly effluent limitation, therefore, was set at the (rounded) projected MBAS MEC of 30,000 µg/L.

This Order includes an average monthly Effluent Limitation for MBAS based on the secondary maximum contaminant level and consideration of available assimilative capacity.

y. ***Nitrite and Nitrate***—Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. Nitrate and nitrite are known to cause adverse health effects in humans. The California DHS has adopted Primary MCLs at Title 22 of the California Code of Regulations (CCR), Table 64431-A, for the protection of human health for nitrite and nitrate that are equal to 1 mg/L and 10 mg/L

(measured as nitrogen), respectively. Title 22 CCR, Table 64431-A, also includes a primary MCL of 10,000 µg/L for the sum of nitrate and nitrite, measured as nitrogen. The discharge from the WWTP has a reasonable potential to cause or contribute to an in-stream excursion above water quality standards for ammonia, nitrite, and nitrate.

USEPA has developed a primary MCL and an MCL goal of 1,000 µg/L for nitrite (as nitrogen). For nitrate, USEPA has developed Drinking Water Standards (10,000 µg/L as Primary Maximum Contaminant Level) and Ambient Water Quality Criteria for protection of human health (10,000 µg/L for non-cancer health effects). Recent toxicity studies have indicated a possibility that nitrate is toxic to aquatic organisms.

The Discharger does not currently use denitrification to remove nitrate from the waste stream, but is proposing to upgrade to do so within the life of this permit. Inadequate or incomplete denitrification may result in the discharge of nitrate and/or nitrite to the receiving stream. The conversion of ammonia to nitrites and the conversion of nitrites to nitrates present a reasonable potential for the discharge to cause or contribute to an in-stream excursion above the Primary MCLs for nitrite and the sum of nitrite and nitrate. Effluent limits for nitrite and nitrate are based on the MCLs. Effluent Limitations for nitrite and nitrate plus nitrite are included in this Order to assure the treatment process adequately nitrifies and denitrifies the waste stream to protect the beneficial use of municipal and domestic supply. Therefore, this Order includes limitations for nitrite and the sum of nitrite and nitrate. Since the Discharger is proposing to upgrade the WWTP to provide nitrification and denitrification, no dilution is needed or warranted and the MCLs are applied as end-of-pipe effluent limitations.

z. **Oil and Grease.** Untreated domestic wastewater contains oil and grease. The Basin Plan includes a water quality objective for oil and grease in surface waters, which states: “Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses”. This Order includes monthly average and daily maximum Effluent Limitations of 10 mg/l and 15 mg/l, respectively. The numeric limitations are based on observations of treatment processes and accumulations of oil and grease on process equipment and banks of the receiving stream. The numeric effluent limitations are based on best professional judgment (BPJ) and Regional Board staff’s experience with treatment plant capabilities and levels necessary to meet the Basin Plan objective for oil and grease.

aa. ***Organochlorine Pesticides***—Alpha BHC (alpha-hexachlorocyclohexane), aldrin, beta endosulfan, beta BHC, heptachlor, and lindane (gamma BHC) were detected in the effluent in concentrations as high as 0.06 µg/L, 0.01 µg/L, 0.02 µg/L, 0.09 µg/L, 0.01 µg/L, and 0.02 µg/L, respectively. Each of these constituents is a chlorinated hydrocarbon pesticide. The Basin Plan requires

that no individual pesticides shall be present in concentrations that adversely affect beneficial uses; discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses; total chlorinated hydrocarbon pesticides shall not be present in the water column at detectable concentrations; and pesticide concentrations shall not exceed those allowable by applicable antidegradation policies. The CTR contains numeric criteria for alpha BHC, aldrin, beta BHC, heptachlor, and lindane of 0.0039 µg/L, 0.00013 µg/L, 0.014 µg/L, 0.00021 µg/L, and 0.019 µg/L, respectively, for freshwaters from which both water and organisms are consumed. The CTR contains numeric criteria for beta endosulfan of 0.056 µg/L as a four-day average (chronic) and 0.22 µg/L as a one-hour average (acute) for the protection of freshwater aquatic life. The detection of alpha BHC at 0.06 µg/L, aldrin at 0.01 µg/L, beta endosulfan at 0.02 µg/L, beta BHC at 0.09 µg/L, heptachlor at 0.01 µg/L, and lindane at 0.02 µg/L in the effluent presents a reasonable potential to exceed the Basin Plan limitations for chlorinated hydrocarbon pesticides and the CTR criteria for alpha BHC, aldrin, beta endosulfan, beta BHC, heptachlor, and lindane. In addition to alpha BHC, aldrin, beta endosulfan, beta BHC, heptachlor, and lindane; the chlorinated hydrocarbon pesticides include, beta BHC, delta BHC, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, chlordane, dieldrin, endrin, endrin aldehyde, alpha endosulfan, endosulfan sulfate, heptachlor, heptachlor epoxide, and toxaphene. Effluent Limitations for organochlorine pesticides are included in this Order and are based on the Basin Plan objective of no detectable concentrations of chlorinated hydrocarbon pesticides. Since the Basin Plan objective is no detectable concentrations, there can be no assimilative capacity. The limitation for chlorinated hydrocarbon pesticides is included in this Order based on reasonable potential to cause or contribute to an in-stream excursion of the water quality objective.

bb. ***pH—***The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the "…*pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses*." The Discharger requested the maximum pH effluent limitation be reduced from 8.5 to 8.0 to relax the ammonia effluent limitations, which are partially determined by the maximum permitted pH. The Discharger provided documentation demonstrating that the historical effluent pH has not exceeded 8.0 and proposes that the new WWTP effluent will comply with these more stringent pH limitations. Effluent Limitations for pH are included in this Order and are based on the Basin Plan objectives for pH and the Discharger's request for more stringent effluent limitations for pH.

cc. ***Settleable Solids***—For inland surface waters, the Basin Plan states that "[w]*ater shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.*" This Order contains average monthly and average daily effluent limitations for settleable solids.

Because the amount of settleable solids is measured in terms of volume per volume without a mass component, it is impracticable to calculate mass limitations for inclusion in this Order.

dd. ***Tertiary Treatment Standards***—To protect the beneficial uses of municipal and domestic supply, contact recreation uses, and irrigation, the Discharger has proposed and Regional Water Board finds, that the wastewater must be disinfected and adequately treated to prevent disease. The Discharger has proposed a tertiary level of treatment, or equivalent, to assure compliance with water quality standards and objectives including the CTR and NTR. The principal infectious agents (pathogens) that may be present in raw sewage may be classified into three broad groups: bacteria, parasites, and viruses. Tertiary treatment, consisting of chemical coagulation, sedimentation, and filtration, has been found to remove approximately 99.5% of viruses. Filtration is an effective means of reducing viruses and parasites from the waste stream. The wastewater must be treated to tertiary standards (filtered), or equivalent, to protect contact recreational and food crop irrigation uses.

The California Department of Health Services (DHS) has developed reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3 (Title 22), for the reuse of wastewater. Title 22 requires that for spray irrigation of food crops, parks, playgrounds, schoolyards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 m/ as a 7-day median. Title 22 also requires that recycled water used as a source of water supply for nonrestricted recreational impoundments be disinfected tertiary recycled water that has been subjected to conventional treatment. A nonrestricted recreational impoundment is defined as "…*an impoundment of recycled water, in which no limitations are imposed on body-contact water recreational activities*." Title 22 is not directly applicable to surface waters; however, the Regional Water Board finds that it is appropriate to apply an equivalent level of treatment to that required by DHS's reclamation criteria because the Feather River is used for irrigation of agricultural land and for contact recreation purposes. The stringent disinfection criteria of Title 22 are appropriate since the undiluted effluent may be used for the irrigation of food crops and/or for body-contact water recreation. Coliform organisms are intended as an indicator of the effectiveness of the entire treatment train and the effectiveness of removing other pathogens. The method of treatment is not prescribed by this Order; however, wastewater must be treated to a level equivalent to that recommended by DHS.

In addition to coliform testing, a turbidity effluent limitation has been included as a second indicator of the effectiveness of the treatment process and to assure compliance with the required level of treatment. The tertiary treatment process, or equivalent, is also capable of reliably meeting a turbidity limitation of 2 nephelometric turbidity units (NTU) as a daily average. Failure of the filtration system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity. Turbidity has a

major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. Coliform testing, by comparison, is not conducted continuously and requires several hours, to days, to identify high coliform concentrations.

The application of tertiary treatment processes results in the ability to achieve lower levels for BOD and TSS than the secondary standards currently prescribed; the 30-day average BOD and TSS limitations have been revised to 10 mg/L, which is technically based on the capability of a tertiary system.

The establishment of tertiary limitations has not been previously required for this discharge; therefore, a schedule for compliance with the tertiary treatment requirement is included as a Provision in this Order. Alternatives to tertiary treatment, such as land disposal or discharge to a different water body with assimilative capacity, would require modification of the permit.

This Order contains Effluent Limitations and a tertiary level of treatment, or equivalent, necessary to protect the beneficial uses of the receiving water. In accordance with California Water Code, Section 13241, the Regional Water Board has considered the following:

As stated in the above Findings, the past, present, and probable future beneficial uses of the receiving stream include irrigated agriculture and contact recreation.

The environmental characteristics of the hydrographic unit including the quality of water available will be improved by the requirement to provide tertiary treatment for this wastewater discharge. Tertiary treatment will allow for the reuse of the undiluted wastewater for food crop irrigation and contact recreation activities which would otherwise be unsafe according to recommendations from the California Department of Health Services (DHS)

Fishable and swimable water quality conditions can be reasonably achieved through the coordinated control of all factors which affect water quality in the area.

The economic impact of requiring an increased level of treatment has been considered. The Discharger has estimated that the increased level of treatment, including expanded flow capacity from 1.8 mgd to 5.0 mgd, will cost approximately $9 million. The current monthly domestic sewer user fee is $14.00; the monthly fee will be increased to $18.50 beginning 1 January 2006. The California average monthly domestic sewer user fee is $26.08. In addition to pathogen removal to protect irrigation and recreation, tertiary treatment is being proposed by the Discharger to aid in meeting discharge limitations for other pollutants, such as heavy metals.

The need to develop housing in the area will be facilitated by improved water quality, which protects the contact recreation and irrigation uses of the

receiving water. DHS recommends that, in order to protect the public health, undiluted wastewater effluent must be treated to a tertiary level for contact recreational and food crop irrigation uses. Without tertiary treatment, the downstream waters could not be safely utilized for contact recreation or the irrigation of food crops.

It is the Regional Water Board's policy, (Basin Plan, page IV-15.00, Policy 2) to encourage the reuse of wastewater. The Regional Water Board requires Dischargers to evaluate how reuse or land disposal of wastewater can be optimized. The need to develop and use recycled water is facilitated by providing a tertiary level of wastewater treatment which will allow for a greater variety of uses in accordance with California Code of Regulations, Title 22.

ee. ***Tetrachloroethene***—The NTR includes a tetrachloroethene criterion of 0.8 µg/L for the protection of human health, based on a one-in-a-million cancer risk for waters from which both water and aquatic organisms are consumed. The observed tetrachloroethene MEC was 7.7 µg/L, from a sample collected 26 September 2001. The projected tetrachloroethene MEC for the purposes of determining reasonable potential is 7.7 µg/L. The observed and projected MECs are greater than the water quality standard; therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the NTR criteria for tetrachloroethene and Effluent Limitations for tetrachloroethene are required. Effluent Limitations for tetrachloroethene are included in this Order and are based on the NTR criterion for the protection of human health and consideration of available assimilative capacity.

The Linda County Water District WWTP data set for the upstream receiving water was augmented with Yuba City WWTF R-1 data for determining the available assimilative capacity, as shown below. Since the Linda County Water District WWTP has not been directly discharging to the Feather River, the Yuba City WWTF R-1 data are also considered representative of the quality of the Feather River upstream of the Linda County Water District WWTP.

Date	Location	Result (µg/L)
23 September 1993	Yuba City WWTF R-1	<0.5
23 January 2002	Linda Co. Water Dist. R-1	<0.15
30 January 2002	Yuba City WWTF R-1	<0.08
7 February 2002	Yuba City WWTF R-1	<0.1
12 February 2002	Linda Co. Water Dist. R-1	<0.15
4 March 2002	Linda Co. Water Dist. R-1	<0.15
11 March 2002	Yuba City WWTF R-1	<0.08
8 April 2002	Linda Co. Water Dist. R-1	<0.15
8 April 2002	Yuba City WWTF R-1	<0.08
6 May 2002	Yuba City WWTF R-1	<0.08
21 May 2002	Linda Co. Water Dist. R-1	<0.08
17 June 2002	Linda Co. Water Dist. R-1	<0.08
17 June 2002	Yuba City WWTF R-1	<0.08
1 July 2002	Linda Co. Water Dist. R-1	<0.08
2 July 2002	Yuba City WWTF R-1	<0.08
5 August 2002	Linda Co. Water Dist. R-1	<0.08
6 August 2002	Yuba City WWTF R-1	<0.08
16 September 2002	Linda Co. Water Dist. R-1	<0.08
25 September 2002	Yuba City WWTF R-1	<0.08
7 October 2002	Linda Co. Water Dist. R-1	<0.08
7 October 2002	Yuba City WWTF R-1	<0.08
4 November 2002	Linda Co. Water Dist. R-1	<0.08
4 November 2002	Yuba City WWTF R-1	<0.08
2 December 2002	Linda Co. Water Dist. R-1	<0.08
9 December 2002	Yuba City WWTF R-1	<0.08
	Lowest Detection Level:	0.08

No tetrachloroethene has been detected in the receiving water. The lowest detection level of the receiving water tetrachloroethene concentrations is 0.08 µg/L; assimilative capacity for tetrachloroethene is available.

$$ECA_{HH} = HH + D_{HH}\left(HH - B_{HH}\right)$$

ECA_{HH} = 0.8 + 1928(0.8 – 0.08) = 1,400 µg/L

Using a multiplier to project the MEC with a 99% confidence level and 99% probability basis (see WQBEL Calculations IV.C.4.d at page 64 for procedure), the projected tetrachloroethene MEC for the purpose of calculating Effluent Limitations is 21 µg/L. The Discharger has not requested the use of more assimilative capacity than is needed for its discharge to comply. The average monthly effluent limitation, therefore, was set at 21 µg/L.

The AMEL was set equal to 21 µg/L and the MDEL was calculated as follows:

$$MDEL = \left(\frac{5.55}{2.09}\right) AMEL = 56\ \mu g / l$$

Where: AMEL = average monthly effluent limitation
MDEL = maximum daily effluent limitation

This Order includes average monthly and maximum daily effluent tetrachloroethene limitations.

ff. ***Thiobencarb—***The Basin Plan includes a water quality objective for pesticides that "[w]*aters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of thiobencarb in excess of 1.0 µg/L.*" The Secondary Maximum Contaminant Level-Consumer Acceptance Limit for thiobencarb is 1 µg/L.

Thiobencarb was detected in an effluent sample collected 23 January 2002 at a concentration of 0.55 µg/L. This result was reported by the analytical laboratory as an estimated concentration (J flag). The concentration fell below the reporting limit (lowest quantifiable concentration) of 1.0 µg/L, but exceeded the method detection limit of 0.26 µg/L. The result for the method blank for this analysis was non-detect. The projected thiobencarb MEC is 2.6 µg/L. The Basin Plan numeric objective and the Secondary MCL are both 1 µg/L. The projected thiobencarb MEC is greater than the water quality standard; therefore, thiobencarb in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan objective and Secondary Maximum Contaminant Level (MCL)-Consumer Acceptance Limit of 1 µg/L for thiobencarb and an Effluent Limitation for thiobencarb is required.

The Linda County Water District WWTP data set for the upstream receiving water was augmented with Yuba City WWTF R-1 data for determining the available assimilative capacity, as shown below. Since the Linda County Water District WWTP has not been directly discharging to the Feather River, the Yuba City WWTF R-1 data are also considered representative of the quality of the Feather River upstream of the Linda County Water District WWTP.

Date	Location	Result (µg/L)
23 January 2002	Linda Co. Water Dist. R-1	<0.26
30 January 2002	Yuba City WWTF R-1	<1
8 April 2002	Linda Co. Water Dist. R-1	<0.21
8 April 2002	Yuba City WWTF R-1	<0.25
17 June 2002	Yuba City WWTF R-1	<0.25
1 July 2002	Linda Co. Water Dist. R-1	<0.25
2 July 2002	Yuba City WWTF R-1	<0.25
6 August 2002	Yuba City WWTF R-1	<0.25
7 October 2002	Linda Co. Water Dist. R-1	<0.45
7 October 2002	Yuba City WWTF R-1	<0.25
	Lowest Detection Level:	0.21

No thiobencarb has been detected in the ambient receiving water. The lowest detection level of the receiving water thiobencarb concentrations is 0.21 µg/L;

assimilative capacity for thiobencarb is available.

$$ECA_{HH} = HH + D_{HH}\left(HH - B_{HH}\right)$$
$$ECA_{HH} = 1 + 1928(1 - 0.21) = 2{,}000\,\mu g/l$$

The Discharger has not requested the use of more assimilative capacity than is needed for its discharge to comply. The average monthly effluent limitation, therefore, was set at the projected MEC of 2.6 µg/L.

This Order includes monthly average effluent thiobencarb limitations.

gg. ***Toxicity***—The Basin Plan states that "[a]*ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances*." The Basin Plan requires that "[a]*s a minimum, compliance with this objective…shall be evaluated with a 96-hour bioassay*." This Order requires both acute and chronic toxicity monitoring to evaluate compliance with this water quality objective.

The Basin Plan further states that "…*effluent limits based upon acute biotoxicity tests of effluents will be prescribed*…". Effluent limitations for acute toxicity are included in this Order.

hh. ***Zinc***—The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for zinc. The criteria for zinc are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The conversion factors for zinc in freshwater are 0.978 for the acute criteria and 0.986 for the chronic criteria.

The observed zinc MEC was detected in a sample collected 11 August 2005 at a concentration of 91 µg/L. The projected zinc MEC for the purpose of determining reasonable potential is 91 µg/L. Using the worst-case ambient (lowest upstream receiving water) measured hardness from the effluent and receiving water, (30 mg/L), the applicable chronic criterion (maximum four-day average concentration) and the applicable acute criterion (maximum one-hour average concentration) are both 43 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for zinc and Effluent Limitations for zinc are required. The Discharger has not requested a mixing zone or use of assimilative capacity for effluent limitations based on protection of aquatic life. The Effluent Limitations for zinc included in this Order are presented in total recoverable concentrations, and are based on CTR criteria for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations

based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

$$CCC = e^{[0.8473\ln(hardness)+0.884]} = 43\ \mu g/L$$
$$CMC = e^{[0.8473\ln(hardness)+0.884]} = 43\ \mu g/L$$
$$AMEL = 1.58\left[\min(0.311CMC, 0.516CCC)\right] = 21\ \mu g/L$$
$$MDEL = 3.22\left[\min\left(0.311CMC, 0.516CCC\right)\right] = 43\ \mu g/L$$

This Order includes average monthly and maximum daily effluent zinc limitations.

4. **WQBEL Calculations**

a. Linda County Water District conducted monitoring for priority and non-priority pollutants. The analytical results were submitted to the Regional Water Board. The results of these sampling events were used in developing this Order. All detectable results from these analyses are summarized in Tables F-1 and F-2 (below). Effluent limitations are included in the Order to protect the beneficial uses of the receiving stream and to ensure that the discharge complies with the Basin Plan objective that toxic substances not be discharged in toxic amounts. Unless otherwise noted, all mass limitations in this Order were calculated by multiplying the concentration limitation by the design flow and the appropriate unit conversion factors.

b. **Mass-based Effluent Limitations.** Title 40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass.

Oxygen-demanding substances, persistent, bioaccumulative toxics, and constituents with an associated total maximum daily load require mass limitations to protect the beneficial uses of the receiving water. Regional Board staff have included mass limitations for persistent, bioaccumulative, toxics based on the 9 November 1998 Federal Register *Notice of Availability of Draft RCRA Waste Minimization PBT Chemical List*. This document does not contain a comprehensive list, however, and additional constituents may require mass limitations as information becomes available.

Mass-based effluent limitations were calculated based upon the permitted average daily discharge flow allowed in Section IV.A.1.c. of the Effluent Limitations and Discharge Specifications. During wet-weather storm events when the effluent flow exceeds the design average dry weather flow (i.e., the

permitted average daily discharge flow), the mass effluent limitations contained in the tables in Final Effluent Limitations IV.A.1.a. and IV.A.1.b. and the tables in Interim Effluent Limitations IV.A.2.a and IV.A.2.b are increased in proportion to the discharge flow.

Table F-1— Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)

Constituents	31-May-00	24-Oct-00	28-Jun-01		3-Jul-01	23-Jan-02			12-Feb-02		
	Effluent	Effluent	Effluent	Blank[1]	Effluent	Effluent	R-1	Blank	Effluent	R-1	Blank
cis-1,2-Dichloroethene	--	--	ND	ND	--	0.88	ND	ND	1.2	ND	ND
1,4-Dichlorobenzene	--	ND	ND	ND	--	ND	ND	ND	0.4[2]	ND	ND
Chloroform	--	ND	ND	ND	--	ND	ND	ND	ND	ND	ND
Chloromethane	--	ND	ND	ND	--	ND	ND	ND	ND	ND	ND
Dichloromethane	--	ND	ND	ND	--	ND	ND	ND	ND	ND	ND
Tetrachloroethene	--	ND	ND	ND	--	1.9	ND	ND	2.6	ND	ND
Toluene	--	ND	ND	ND	--	0.49[2]	ND	ND	ND	ND	ND
Trichloroethene	--	ND	ND	ND	--	0.51	ND	ND	0.8	ND	ND
Methyl-tert-butyl ether	--	--	--	--	--	ND	ND	ND	0.4[2]	ND	ND
Xylenes	--	ND	ND	ND	--	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	--	7.9	11	ND	ND	ND	ND	ND	--	--	--
Dibenzo(a,h)-anthracene	--	ND	--	--	--	ND	ND	ND	--	--	--
Diethyl phthalate	--	ND	--	--	ND	ND	ND	ND	--	--	--
Phenanthrene	--	ND	--	--	--	ND	ND	ND	--	--	--
Aluminum	--	--	--	--	--	ND	ND	ND	110	130	ND
Antimony	--	--	--	--	--	0.4[2]	0.37	ND	ND	ND	ND
Arsenic	--	ND	--	--	--	ND	ND	ND	3.1[2,3]	1.7[2]	2.18[2]
Asbestos	--	--	--	--	--	--	ND	--	ND	ND	--
Barium	--	--	--	--	--	43	45	ND	54	14	ND
Cadmium	--	ND	--	--	--	0.046[2]	0.047[2]	ND	ND	ND	ND
Chromium (total)	--	ND	--	--	--	0.98[2,3]	1.3[2]	1.95[2]	1.6[2]	ND	ND
Chromium (VI)	--	--	--	--	--	ND	ND	ND	ND	ND	ND
Copper	--	ND	--	--	--	7.0	7.7	ND	10	1.1[2]	ND
Cyanide	--	38	--	--	--	ND	ND	ND	ND	ND	ND
Fluoride	--	--	--	--	--	120	ND	ND	0.13	ND	ND
Iron	275	--	191	--	--	53	65	ND	140	260	ND
Lead	--	ND	--	--	--	ND	ND	ND	0.56[2]	ND	ND
Mercury	--	ND	--	--	--	0.0171	0.00249	0.001	0.036	0.003	0.00053
Manganese	--	--	61	--	--	21	19	ND	3200	30	ND
Nickel	--	ND	--	--	--	1.7	1.7	ND	1.8[2]	10	ND
Selenium	--		--	--	--	0.52[2,3]	0.44[2]	0.432[2]	ND	ND	ND
Silver	--	ND	--	--	--	0.15[2, 3]	0.12[2]	0.303[2]	0.21[2]	ND	ND
Thallium	--	ND	--	--	--	ND	ND	ND	0.78[2]	0.35[2]	0.377[2]
Zinc	--	ND	--	--	--	19	21	ND	24	ND	ND
alpha-BHC	--	ND	--	--	--	ND	ND	ND	--	--	--
Aldrin	--	ND	--	--	--	0.0051[2]	ND	ND	--	--	--
beta-Endosulfan	--	ND	--	--	--	0.020[2]	ND	ND	--	--	--
beta-BHC	--	ND	--	--	--	0.0047[2]	ND	ND	--	--	--
Heptachlor	--	ND	--	--	--	0.014[2]	ND	ND	--	--	--
Lindane	--	ND	--	--	--	ND	ND	ND	--	--	--
2,4-D	--	--	--	--	--	0.27[2]	ND	ND	--	--	--
Dalapon	--	--	--	--	--	2.1[2]	ND	ND	--	--	--
Methoxychlor	--	--	--	--	--	0.034[2]	ND	ND	--	--	--
Picloram	--	--	--	--	--	0.016[2]	ND	ND	--	--	--

[1] Method Blank
[2] J Flag (estimated concentration)
[3] Blank Result exceeds 10% of sample result; sample result considered suspect

Table F-1— Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)

Constituents	31-May-00	24-Oct-00	28-Jun-01		3-Jul-01	23-Jan-02			12-Feb-02		
	Effluent	Effluent	Effluent	Blank[1]	Effluent	Effluent	R-1	Blank	Effluent	R-1	Blank
Thiobencarb	--	--	--	--	--	0.55[2]	ND	ND	--	--	--
2,4,5-TP (Silvex)	--	ND	--	--	--	0.083[2]	ND	ND	--	--	--
Diazinon	--	--	--	--	--	0.13[2,4]	ND[4]	ND	--	--	--
Chloride (mg/L)	60	--	70	3.5	60	52	2.1	ND	49	1.8	ND
Hardness (mg/L)	125	--	106	--	--	130	48	ND	120	46	ND
MBAS (mg/L)	--	--	--	--	--	1.9	ND	ND	0.5	ND	ND
Phosphorous, Total (as P, mg/L)	--	--	3.6	--	--	3.5	ND	ND	3.2	0.48	ND
Sulfate (mg/L)	23	--	12	--	--	19	5.8	ND	17	1.8	ND
Sulfide (as S, mg/L)	--	--	--	--	--	ND	ND	ND	ND	ND	ND
Total Dissolved Solids (mg/L)	420	--	388	--	--	--	--	--	--	--	--

[4] Sample was extracted past hold time for Diazinon only.

Table F-1— Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)

Constituents	4-Mar-02			8-Apr-2002			21-May-02		
	Effluent	R-1	Blank	Effluent	R-1	Blank	Effluent	R-1	Blank
cis-1,2-Dichloroethene	2.8	ND	ND	0.45[2]	ND	ND	0.28[2]	ND[5]	ND
1,4-Dichlorobenzene	0.46[2]	ND	ND	0.34[2]	ND	ND	0.42[2]	ND[5]	ND
Chloroform	ND	ND	ND	ND	ND	ND	0.15[2]	ND[5]	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND[5]	ND
Dichloromethane	ND	1.5[2,6]	2.39	1.3[2,6]	1.2[2,6]	0.900 [2]	0.091 [2]	ND[5]	ND
Tetrachloroethene	5	ND	ND	0.99	ND	ND	0.67	ND[5]	ND
Toluene	0.51	ND	ND	ND	ND	ND	0.086[2]	ND[5]	ND
Trichloroethene	1.7	ND	ND	ND	ND	ND	ND	ND[5]	ND
Methyl-tert-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND[5]	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND[5]	ND
Bis(2-ethylhexyl) phthalate	--	--	--	9.0	ND	ND	--	--	--
Dibenzo(a,h)-anthracene	--	--	--	0.11	ND	ND	--	--	--
Diethyl phthalate	--	--	--	1[2]	ND	ND	--	--	--
Phenanthrene	--	--	--	ND	ND	ND	--	--	--
Aluminum	240	230	ND	280	100	ND	470	400	ND
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND
Asbestos	ND	ND	--	ND	ND	--	ND	ND	--
Barium	45	15	ND	45	12	ND	57	13	ND
Cadmium	ND	ND	ND	0.056[2]	ND	ND	0.092[2]	ND	ND
Chromium (total)	2.1[2]	2.4[2]	ND	2[2,3]	2.1[2]	1.38[2]	2.3[2,3]	2.6[2]	2.14[2]
Chromium (VI)	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	12	1[2]	0.654[2]	19	1.2[2]	ND	11	1.4[2]	ND
Cyanide	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	120	ND	ND	ND	ND	ND	0.14	ND	ND
Iron	150	240	ND	220	190	ND	250	500	ND
Lead	0.5[2]	ND	ND	ND	ND	ND	1[2]	ND	ND
Mercury	0.0295	0.00448	0.00047	0.016	0.0016	ND	0.0265	0.0003	0.0007
Manganese	150	35	ND	93	22	ND	74	32	ND
Nickel	ND	ND	ND	2.6	1.1	ND	3.3	1.7	ND
Selenium	ND	ND	ND	2.3	2.2	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	29	ND	ND	33	ND	ND	39	ND	ND
alpha-BHC	--	--	--	ND	ND	ND	--	--	--
Aldrin	--	--	--	ND	ND	ND	--	--	--
beta-Endosulfan	--	--	--	ND	ND	ND	--	--	--
beta-BHC	--	--	--	ND	ND	ND	--	--	--
Heptachlor	--	--	--	ND	ND	ND	--	--	--
Lindane	--	--	--	0.023[2]	ND	ND	--	--	--
2,4-D	--	--	--	ND[7]	ND	ND	--	--	--
Dalapon	--	--	--	3.2[2,8]	ND	ND	--	--	--
Methoxychlor	--	--	--	0.093[2]	ND	ND	--	--	--

[5] Sample was taken from VOA vial with significant headspace, which may have resulted in loss of headspace data
[6] Blank spike duplicate data lost, based on only blank spike data.
[7] Sample received beyond EPA recommended holding time. Results still might be usefull
[8] Sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits

Table F-1— Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)									
Constituents	4-Mar-02			8-Apr-2002			21-May-02		
	Effluent	R-1	Blank	Effluent	R-1	Blank	Effluent	R-1	Blank
Picloram	--	--	--	0.14[2,6]	ND	ND	--	--	--
Thiobencarb	--	--	--	ND	ND	ND	--	--	--
2,4,5-TP (Silvex)	--	--	--	0.14[2,6]	ND	ND	--	--	--
Diazinon	--	--	--	ND[4]	0.14[2, 4]	ND	--	--	--
Chloride (mg/L)	45	1.9	ND	50	1.9	0.0196[2]	62	1.6	ND
Hardness (mg/L)	130	220	ND	120	44	ND	110	41	ND
MBAS (mg/L)	1.8	ND	ND	2.2	ND	ND	1.8	ND[5]	ND
Phosphorous, Total (as P, mg/L)	3.5	ND	ND	0.77	ND	ND	8.8	ND	ND
Sulfate (mg/L)	18	5.3	ND	21	6.5	ND	15	4	ND
Sulfide (as S, mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids (mg/L)	340	64	ND	360	72	ND	96	56	ND

Table F-1—Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)									
Constituents	17-Jun-02			1-Jul-02			5-Aug-02		
	Effluent	R-1	Blank	Effluent	R-1	Blank	Effluent	R-1	Blank
cis-1,2-Dichloroethene	0.11[2]	ND	ND	0.16[2]	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.40[2]	ND	ND	0.74[2]	ND	ND	ND	ND	ND
Chloroform	0.15[2]	ND	ND	0.33[2]	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.22[2]	ND	ND	0.19[2]	ND	ND	ND	ND	ND
Toluene	1.4[2]	0.075[2]	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl-tert-butyl ether	ND	0.69[2]	ND	ND	0.97[2]	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	--	--	--	ND	ND	ND	--	--	--
Dibenzo(a,h)-anthracene	--	--	--	ND	ND	ND	--	--	--
Diethyl phthalate	--	--	--	2	ND	ND	--	--	--
Phenanthrene	--	--	--	0.075	ND	ND	--	--	--
Aluminum	160	200	ND	220	310	ND	390	110	ND
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND
Asbestos	ND	0.041	--	ND	ND	--	ND	ND	--
Barium	41	12	ND	45	ND	ND	57	16	ND
Cadmium	0.048[2]	ND	ND	0.059[2]	ND	ND	0.10[2]	ND	ND
Chromium (total)	2.3[2,3]	2.4[2]	2.14[2]	3[2,3]	3[2]	2.39[2]	4.8[2,3]	5	1.82[2]
Chromium (VI)	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	8.6	1.1[2]	ND	9.2	1.3[2]	ND	18	3.3[2]	ND
Cyanide	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	0.11	ND	ND	0.19	ND	ND	0.19	ND	ND
Iron	130	300	ND	140	370	ND	170	170	ND
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.0103	0.00193	0.00058	0.00957	0.00165	ND	0.0264	0.00329	0.00055
Manganese	44	27	ND	44	23	ND	92	25	ND
Nickel	1.9	1.2	ND	2.3	1.7	ND	4.5	3.3	ND
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	24	ND	ND	29	ND	ND	34	ND	ND
Alpha-BHC	--	--	--	ND	--	ND	--	--	--
Aldrin	--	--	--	ND	--	ND	--	--	--
beta-Endosulfan	--	--	--	ND	--	ND	--	--	--
beta-BHC	--	--	--	ND	--	ND	--	--	--
Heptachlor	--	--	--	ND	--	ND	--	--	--
Lindane	--	--	--	ND	--	ND	--	--	--
2,4-D	--	--	--	ND	--	ND	--	--	--
Dalapon	--	--	--	ND	--	ND	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Picloram	--	--	--	ND	--	ND	--	--	--
Thiobencarb	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	ND	--	ND	--	--	--
Diazinon	--	--	--	ND[4]	ND[4]	ND	--	--	--
Chloride (mg/L)	67	1.2	ND	79	1.3	ND	71	1.2	ND

Table F-1—Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)									
Constituents	17-Jun-02			1-Jul-02			5-Aug-02		
	Effluent	R-1	Blank	Effluent	R-1	Blank	Effluent	R-1	Blank
Hardness (mg/L)	62	41	ND	130	38	ND	160	160	ND
MBAS (mg/L)	1.7	ND	ND	6.6	ND	ND	2.6	ND	ND
Phosphorous, Total (as P, mg/L)	4.1	ND	ND	3.5	ND	ND	3.4	ND	ND
Sulfate (mg/L)	18	3.4	ND	18	3.3	ND	15	2.9	ND
Sulfide (as S, mg/L)	ND	ND	ND	ND	ND	ND	0.1	ND	ND
Total Dissolved Solids (mg/L)	370	70	ND	340	26	ND	360	58	ND

Table F-1—Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)

Constituents	16-Sep-02			7-Oct-02			4-Nov-02		
	Effluent	R-1	Blank	Effluent	R-1	Blank	Effluent	R-1	Blank
cis-1,2-Dichloroethene	0.30[2]	ND	ND	0.11[2]	ND	ND	0.11[2]	ND	ND
1,4-Dichlorobenzene	0.64	ND	ND	0.50[2]	ND	ND	0.37[2]	ND	ND
Chloroform	0.28[2]	ND	ND	0.32[2]	ND	ND	0.23[2]	ND	ND
Chloromethane	ND	ND	ND	0.29[2]	ND	ND	0.23[2]	0.19[2]	ND
Dichloromethane	ND[2]	ND	ND	0.13[2]	0.12[2]	ND	0.14[2]	0.15[2]	ND
Tetrachloroethene	2	ND	ND	0.16[2]	ND	ND	0.33[2]	ND	ND
Toluene	2.2	ND	ND	1.5[2]	0.23[2]	ND	2.0	0.080[2]	ND
Trichloroethene	0.2[2]	ND	ND	ND	ND	ND	ND	ND	ND
Methyl-tert-butyl ether	0.12[2]	1.1	ND	0.14[2]	1.1[2]	ND	0.29[2]	0.55[2]	ND
Xylenes	ND	ND	ND	ND	0.072[2]	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	--	--	--	6.0	--	ND	--	--	--
Dibenzo(a,h)-anthracene	--	--	--	ND	ND	ND	--	--	--
Diethyl phthalate	--	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	ND	ND	ND	--	--	--
Aluminum	ND	ND	ND	290	ND	ND	320	100	ND
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND
Asbestos	ND	ND	--	ND	ND	--	ND	ND	--
Barium	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.06[2, 3]	ND	0.041	0.081[2]	ND	ND	0.065[2]	ND	ND
Chromium (total)	1.8[3]	2.4[2]	0.942[2]	2.4[3]	2.3[2]	1.65[2]	1.9[2,3]	1.5[2]	0.84[2]
Chromium (VI)	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	8.2	ND	ND	10	1.7[2]	ND	8.4	0.91[2]	ND
Cyanide	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	170	370	ND	130	180	ND	150	260	ND
Lead	0.70	ND	ND	0.95	0.32[2]	ND	0.92	ND	ND
Mercury	0.019	0.00312	0.0004[2]	0.017	0.0024	0.00046[2]	0.025	0.0014	ND
Manganese	0.13	ND	ND	38	14	ND	36	75	ND
Nickel	2.6	1.7	ND	3.0	1.7	ND	2.9	1.2	ND
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	24	ND	ND	30	ND	ND	31	ND	ND
alpha-BHC	--	--	--	ND	--	ND	--	--	--
Aldrin	--	--	--	ND	--	ND	--	--	--
beta-Endosulfan	--	--	--	ND	--	ND	--	--	--
beta-BHC	--	--	--	ND	--	ND	--	--	--
Heptachlor	--	--	--	ND	--	ND	--	--	--
Lindane	--	--	--	ND	ND	ND	--	--	--
2,4-D	--	--	--	ND	ND	ND	--	--	--
Dalapon	--	--	--	ND	ND	ND	--	--	--
Methoxychlor	--	--	--	ND	--	ND	--	--	--
Picloram	--	--	--	0.064[2]	ND	ND	--	--	--
Thiobencarb	--	--	--	ND	--	ND	--	--	--
2,4,5-TP (Silvex)	--	--	--	ND	ND	ND	--	--	--
Diazinon	--	--	--	0.36	ND	ND	--	--	--
Chloride (mg/L)	73	ND	ND	61	ND	ND	59	2.3	ND

Table F-1—Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)

Constituents	16-Sep-02			7-Oct-02			4-Nov-02		
	Effluent	R-1	Blank	Effluent	R-1	Blank	Effluent	R-1	Blank
Hardness (mg/L)	130	43	ND	120	37	ND	--	--	--
MBAS (mg/L)	ND	ND	ND	0.90	ND	ND	1.3	ND[7]	ND
Phosphorous, Total (as P, mg/L)	ND	3.4	ND	3.4	0.018	ND	3.3	0.018[7]	ND
Sulfate (mg/L)	15	3.0	ND	21	ND	ND	18	4.2	ND
Sulfide (as S, mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids (mg/L)	370	48	ND	390	55	ND	410	83	ND

Table F-1— Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)

Constituents	2-Dec-02			10-Sep-03		8-Oct-03		11-Aug-04		11-Aug-05	
	Effluent	R-1	Blank	Effluent	Blank	Effluent	Blank	Effluent	Blank	Effluent	Blank
cis-1,2-Dichloroethene	0.15[2]	ND	ND	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	0.44[2]	ND	ND	--	--	ND	ND	--	--	ND	ND
Chloroform	0.27[2]	ND	ND	2.1	ND	2.1	ND	4.9	ND	ND	ND
Chloromethane	ND	ND	ND	--	--	ND	ND	--	--	ND	ND
Dichloromethane	ND	ND	ND	--	--	ND	ND	--	--	ND	ND
Tetrachloroethene	0.23[2]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	--	--	1.4	ND	--	--	2.8	ND
Trichloroethene	ND	ND	ND	--	--	ND	ND	--	--	ND	ND
Methyl-tert-butyl ether	0.59[2]	0.33[2]	ND	--	--	--	--	--	--	--	--
Xylenes	ND	ND	ND	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	--	ND	ND	ND	ND	22	ND	--	--
Dibenzo(a,h)-anthracene	--	--	--	ND	ND	--	--	ND	ND	ND	ND
Diethyl phthalate	--	--	--	--	--	--	--	--	--	ND	ND
Phenanthrene	--	--	--	--	--	--	--	--	--	ND	ND
Aluminum	270	150	ND	--	--	--	--	--	--	--	--
Antimony	ND	ND	ND	--	--	ND	ND	--	--	ND	ND
Arsenic	ND	ND	ND	--	--	ND	ND	--	--	ND	ND
Asbestos	ND	ND	--	--	--	--	--	--	--	--	--
Barium	ND	ND	ND	--	--	--	--	--	--	--	--
Cadmium	0.033[2]	ND	ND	--	--	ND	ND	--	--	ND	ND
Chromium (total)	1.7[2]	1.5[2]	1.79[2]	--	--	ND	ND	--	--	ND	ND
Chromium (VI)	ND	ND	ND	--	--	5.30	ND	--	--	23	ND
Copper	9.0	1.3[2]	ND	--	--	8.0	ND	--	--	ND	ND
Cyanide	ND	ND	ND	--	--	ND	ND	--	--	ND	ND
Fluoride	ND	ND	ND	--	--	--	--	--	--	--	--
Iron	160	310	ND	--	--	179	ND	--	--	--	--
Lead	0.77	0.12[2]	ND	--	--	ND	ND	--	--	ND	ND
Mercury	0.016	0.0012	0.00026	--	--	ND	ND	--	--	ND	ND
Manganese	25	59	ND	--	--	--	--	--	--	--	--
Nickel	2.2	1.2	ND	--	--	2.1	ND	--	--	ND	ND
Selenium	ND	ND	ND	--	--	ND	ND	--	--	ND	ND
Silver	ND	ND	ND	--	--	ND	ND	--	--	ND	ND
Thallium	ND	ND	ND	--	--	ND	ND	--	--	ND	ND
Zinc	27	ND	ND	--	--	22	ND	--	--	91	ND
alpha-BHC	--	--	--	ND	ND	--	--	0.06	ND	ND	ND
Aldrin	--	--	--	ND	ND	--	--	ND	ND	ND	ND
beta-Endosulfan	--	--	--	--	--	--	--	--	--	ND	ND
beta-BHC	--	--	--	ND	ND	--	--	0.094	ND	ND	ND
Heptachlor	--	--	--	ND	ND	--	--	ND	ND	ND	ND
Lindane	--	--	--	ND	ND	--	--	ND	ND	--	--
2,4-D	--	--	--	--	--	--	--	--	--	--	--
Dalapon	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--	--	--
Picloram	--	--	--	--	--	--	--	--	--	--	--
Thiobencarb	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--	--	--
Diazinon	--	--	--	--	--	--	--	--	--	--	--
Chloride (mg/L)	56	ND	ND	--	--	65.1	ND	--	--	--	--

Table F-1— Linda County Water District Wastewater Treatment Plant, Order No. R5-2006-0096: CTR+ Detectable Results (µg/L)

Constituents	2-Dec-02			10-Sep-03		8-Oct-03		11-Aug-04		11-Aug-05	
	Effluent	R-1	Blank	Effluent	Blank	Effluent	Blank	Effluent	Blank	Effluent	Blank
Hardness (mg/L)	100	44	ND	--	--	106	ND	--	--	--	--
MBAS (mg/L)	2.0	ND	ND	--	--	--	--	--	--	--	--
Phosphorous, Total (as P, mg/L)	0.98	ND	ND	--	--	--	--	--	--	--	--
Sulfate (mg/L)	15	3.9	ND	--	--	18.8	ND	--	--	--	--
Sulfide (as S, mg/L)	ND	ND	ND	--	--	--	--	--	--	--	--
Total Dissolved Solids (mg/L)	340	73	ND	--	--	--	--	--	--	--	--

***Table F-2—Linda County Water District Wastewater Treatment Plant Order No. R5-2006-0096: Reasonable Potential Statistics Summary* (µg/L)**					
Constituent	Max.	Mean	σ	CV[1]	# Results[2]
cis-1,2-Dichloroethene	2.8	0.70	0.931	1.331	13
1,4-Dichlorobenzene	0.74	0.82	1.244	1.520	16
Chloroform	4.9	0.94	1.338	1.418	18
Chloromethane	0.29	0.76	1.658	0.600	16
Dichlorobromomethane	1.1	0.44	0.798	0.600	18
Dichloromethane	1.3	0.69	0.951	1.375	16
Tetrachloroethene	5.0	1.2	1.332	1.152	18
Toluene	2.8	1.0	0.972	0.978	16
Trichloroethene	1.7	0.58	0.868	1.501	16
MTBE	0.59	0.18	0.169	0.937	12
Xylenes	ND	0.85	1.761	0.600	14
Bis(2-ethylhexyl) phthalate[3]	22	7.6	6.062	0.793	11
Dibenzo(a,h)-anthracene	0.11	1.6	1.799	0.600	8
Diethyl phthalate	4.0	3.1	1.850	0.600	8
Phenanthrene	0.075	1.2	1.942	0.600	6
Aluminum	470	250	122	0.495	12
Antimony	0.40	1.0	3.05	0.600	15
Arsenic	3.1	1.4	3.42	0.600	15
Asbestos	ND	0.33	0.516	0.600	4
Barium	57	37	21.6	0.585	12
Cadmium	0.10	0.11	0.134	1.232	15
Chromium (total)	4.8	2.0	1.081	0.539	15
Chromium (VI)	23	2.9	5.942	0.600	14
Copper	19	9.3	4.955	0.533	15
Cyanide	38	4.2	9.350	0.600	15
Fluoride	190	100	59.90	0.580	12
Iron	275	170	53.37	0.319	15
Lead	1.0	1.16	1.85	1.599	15
Mercury	0.0361	0.0299	0.02981	0.997	15
Manganese	3,200	310	869.8	2.821	13
Nickel	4.5	3.7	5.982	1.597	15
Selenium	2.3	1.1	2.536	0.600	15
Silver	0.21	0.76	2.560	0.600	15
Thallium	0.78	0.49	1.263	0.600	15
Zinc	91	30	18.95	0.623	15
alpha-BHC	0.06	0.04	0.0867	0.600	8
Aldrin	0.0051	0.035	0.0868	0.600	8
beta-Endosulfan	0.02	0.093	0.1998	0.600	6
beta-BHC	0.094	0.046	0.0886	0.600	8
Heptachlor	0.014	0.035	0.0869	0.600	8
Lindane	0.023	0.037	0.0866	0.600	8
2,4-D	0.27	1.4	2.432	0.600	4
Dalapon	3.2	2.6	2.05	0.600	4

[1] Coefficient of variation. Defaults to 0.6 for less than ten samples and/or 80% or more of results are non-detect
[2] Number of data points considered in assessing reasonable potential and in determining effluent limitations.

***Table F-2—Linda County Water District Wastewater Treatment Plant Order No. R5-2006-0096: Reasonable Potential Statistics Summary* (µg/L)**					
Constituent	Max.	Mean	σ	CV[1]	# Results[2]
Methoxychlor	0.093	0.48	0.994	0.600	6
Picloram	0.16	0.22	0.194	0.600	4
Thiobencarb	0.55	0.25	0.206	0.600	4
2,4,5-TP (Silvex)	0.14	0.19	0.211	0.600	4
Diazinon	0.36	0.14	0.149	0.600	4
Chloride (mg/L)	79	61	9.43	0.154	16
MBAS (mg/L)	6.6	2.1	1.60	0.754	11
Phosphorous, Total (as P,	8.8	3.2	2.21	0.688	12
Sulfate (mg/L)	23	18	2.87	0.163	15
Sulfide (mg/L)	0.10	0.065	0.0151	0.600	11
Total Dissolved Solids (mg/L)	420	350	83.8	0.240	12

c. Effluent Limitations for water quality-based limitations were calculated in accordance with Section 1.4 of the SIP and the TSD. The following paragraphs describe the general methodology used for calculating Effluent Limitations.

d. *Calculations for Dilution Ratios*

Harmonic mean flow =	Harmonic mean flow = 3,586 cfs (1 October 1968 through 30 September 1998, from United States
Long-term average flow =	1.86 cfs (1 January 2002 through 31 August 2005, from discharger self-monitoring reports)

For human health criteria/objectives, $D_{HH} = \frac{Harmonic\ Mean\ Q}{Long-term\ ave\ Q} = \frac{3586\,cfs}{1.86\,cfs} = 1928$.

e. *Calculations for Effluent Limitations*—In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

$$ECA_{acute} = CMC \qquad ECA_{chronic} = CCC \qquad ECA_{HH} = HH + D_{HH}\left(HH - B_{HH}\right)$$

where:

ECA_{acute} =	effluent concentration allowance for acute (one-hour average) toxicity criterion
$ECA_{chronic}$ =	effluent concentration allowance for chronic (four-day average) toxicity criterion
ECA_{HH} =	effluent concentration allowance for human health, agriculture, or other long-term criterion/objective
CMC =	criteria maximum concentration (one-hour average)
CCC =	criteria continuous concentration (four-day average, unless otherwise noted)
D_{HH} =	dilution ratio for human health, agriculture, or other long-term criterion/objective
HH =	human health, agriculture, or other long-term criterion/objective
B_{HH} =	background concentration for human health. (for carcinogens: arithmetic mean of R-1 concentrations, for non-carcinogens: observed maximum R-1 concentration; or lowest detection level if all results are non-detect)

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTA) using statistical multipliers and the lowest is used. Additional statistical multipliers were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL). The statistical multipliers were calculated using data shown in Table F-1.

Human health ECAs are set equal to the AMEL and a statistical multiplier is used to calculate the MDEL.

$$AMEL = mult_{AMEL}\left[\min\left(\overbrace{M_A ECA_{acute}}^{\text{LTA}_{acute}}, \underbrace{M_C ECA_{chronic}}_{\text{LTA}_{chronic}}\right)\right]$$

$$MDEL = mult_{MDEL}\left[\min\left(M_A ECA_{acute}, M_C ECA_{chronic}\right)\right]$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

where: $mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL
M_A = statistical multiplier converting CMC to LTA
M_C = statistical multiplier converting CCC to LTA

f. *Use of Assimilative Capacity*—The Discharger did not request the use of more assimilative capacity than is needed for its discharge to comply. For some constituents, more assimilative capacity is available than is needed for compliance. Therefore, in calculating effluent limitations, the calculated ECA_{HH} was compared to a projected MEC. The projected MEC is determined by multiplying the observed MEC by a factor that accounts for statistical variation. The multiplying factor is determined (for 99% confidence level and 99% probability basis) using the number of results available and the coefficient of variation (standard deviation divided by the mean) of the sample results. In accordance with the SIP, non-detect results were counted as one-half the detection level when calculating the mean. The default coefficient of variation for constituents with fewer than ten samples and/or for which 80% or more of the sample results were non-detect is 0.6. Projected MEC calculations were based on projection methods contained in the USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001] and are summarized below.

$$p_n = (1 - confidence\ \ level)^{1/n} \quad C_{99} = \left(2.326\sigma - 0.5\sigma^2\right) \quad C_p = \left(z\sigma - 0.5\sigma^2\right)$$

where:
p_n = percentile represented by the highest concentration in the available data
n = number of available samples
C_{99} = numerator for projection factor
C_p = denominator for projection factor
σ^2 = $ln(CV^2+1)$
CV = coefficient of variation; calculated as the standard deviation divided by the mean
z = normal distribution value for p_n percentile
2.326 = normal distribution value for 99th percentile

The projected MEC is equal to the observed MEC multipled by $\frac{C_{99}}{C_{p_n}}$. Where the projected MEC was less than the ECA_{HH}, the projected MEC was set equal to the AMEL and the MDEL, where appropriate, was calculated as described in WQBEL Calculations IV.C.4.d.

g. *Mass-based Effluent Limitations*—

   i. Mass-based interim effluent limitations were based upon a design treatment capacity of 1.8 mgd.

   ii. Mass-based final effluent limitations were based upon a design treatment capacity of 5.0 mgd.

h. USEPA recommends a maximum daily limitation rather than an average weekly limitation for water quality based permitting.

Summary of Water Quality-based Effluent Limitations
Discharge Point EFF-001 and EFF-002

Parameter[1]	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	--	6.5	8.0
Aluminum	µg/L	74	--	140	--	--
Bis (2-ethylhexyl)	µg/L	1.8	--	4.1	--	--
Phthalate	lbs/day[1]	0.075	--	0.17	--	--
Chloroform	µg/L	26	--	--	--	--
	lbs/day[1]	1.1	--	--	--	--
Chromium (VI),	µg/L	8.1	--	16	--	--
Total Recoverable	lbs/day[1]	0.34	--	0.68	--	--
Copper,	µg/L	2.4	--	4.5	--	--
Total Recoverable	lbs/day[1]	0.10	--	0.19	--	--
Cyanide,	µg/L	4.3	--	8.5	--	--
Total Recoverable	lbs/day[1]	0.18	--	0.36	--	--
Diazinon	µg/L	0.040	--	0.080	--	--
	lbs/day[1]	0.0017	--	0.0033	--	--
Dibenzo(a,h)anthracene	µg/L	0.0044	--	0.0088	--	--
	lbs/day[1]	0.00018	--	0.00037	--	--
Dichlorobromomethane	µg/L	2.6	--	5.3	--	--
cis-1,2-Dichloroethene	µg/L	17	--	--	--	--
Iron, Total Recoverable	µg/L	300	--	--	--	--
Lead,	µg/L	0.43	--	1.2	--	--
Total Recoverable	lbs/day[1]	0.018	--	0.052	--	--
Manganese, Total Recoverable	µg/L	50	--	--	--	--
Methoxychlor	µg/L	--	--	--	--	0.03
Methylene Blue Active Substances	mg/L	30	--	--	--	--
Nitrite	mg/L	1	--	--	--	--
(as N)	lbs/day[1]	40	--	--	--	--

1. Based upon a design treatment capacity of 5.0 mgd.
2. The non-detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with the detection limits equal to or less than the lowest minimum level published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Plan or SIP), for the organochlorine pesticides listed in Appendix 4. For all other organochlorine pesticides, the Discharger shall use the lowest possible detectable level with a maximum acceptable detection level of 0.05 µg/L.

Parameter[1]	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Nitrite + Nitrate (as N)	mg/L	10	--	--	--	--
	lbs/day[1]	400	--	--	--	--
Oil and Grease	mg/L	10		15		
	lbs/day	420		630		
Organochlorine Pesticides	µg/L	--	--	--	--	ND[2]
		--	--	--	--	--
Settleable Solids	m///	0.1	--	0.2	--	--
Tetrachloroethene	µg/L	21	--	56	--	--
Thiobencarb	µg/L	2.6	--	--	--	--
Zinc, Total Recoverable	µg/L	21	--	43	--	--
	lbs/day[1]	0.88	--	1.8	--	--

a. **Electrical Conductivity**: The 30-day 90th percentile effluent electrical conductivity shall not exceed 780 µmhos/cm.

b. **Total Residual Chlorine**: Effluent total residual chlorine shall not exceed the following:

   i. 0.011 mg/L as a four-day average;
   ii. 0.46 lbs/day as a four-day average;
   iii. 0.019 mg/L as a one-hour average; and
   iv. 0.79 lbs/day as a one-hour average.

c. **Total Ammonia**: Effluent total ammonia (as N) shall not exceed the following from 1 April through 31 October:

   i. 1.22 mg/L as a monthly average;
   ii. 50.9 lbs/day as a monthly average;
   iii. 5.62 mg/L as a one-hour average; and
   iv. 234 lbs/day as a one-hour average.

   Total Ammonia: Effluent total ammonia (as N) shall not exceed the following from 1 November through 31 March:

   v. 1.80 mg/L as a monthly average;
   vi. 75.1 lbs/day as a monthly average;
   vii. 5.62 mg/L as a one-hour average; and
   viii. 234 lbs/day as a one-hour average.

d. **Turbidity**: Effluent turbidity shall not exceed the following:

   i. 2 NTU as a daily average;
   ii. 5 NTU more than 5 percent of the time within a 24-hour period; and
   iii. 10 NTU at any time.

e. **Total Coliform Organisms**: Effluent total coliform organisms concentrations shall not exceed the following:

i. 2.2 MPN/100 m/ as a seven-day median;
ii. 23 MPN/100 m/ more than once in any 30-day period; and
iii. 240 MPN/100 m/ at any time.

f. **Mercury**: The total monthly mass discharge of total mercury shall not exceed 0.016 pounds/month.

g. **Average Dry Weather Flow**: **Prior to satisfaction of Provision C.2.a, the average dry weather discharge flow shall not exceed 1.8 million gallons per day. Upon satisfaction of Provision C.2.a,** the average dry weather discharge flow shall not exceed 5.0 million gallons per day.

5. **Whole Effluent Toxicity (WET)**

a. **Acute Toxicity**: Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay - - - - - - - - - 70%
Median for any three or more consecutive bioassays - - - - 90%

D. **Final Effluent Limitations**

1. 40 CFR §122.45 states that:

a. "*In the case of POTWs, permit effluent limitations…shall be calculated based on design flow.*"

b. "*For continuous discharges all permit effluent limitations…shall unless impracticable be stated as…*[a]*verage weekly and average monthly discharge limitations for POTWs*."

c. "*All pollutants limited in permits shall have limitations…expressed in terms of mass except…*[f]*or pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass…Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations*."

Summary of Final Effluent Limitations
Discharge Point EFF-001 and EFF-002

Parameter[1]	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand, 5-day @ 20°C	mg/L	10	15	20	--	--
	lbs/day[2]	420	630	830	--	--
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day	420	630	830	--	--
Settleable Solids	m///	0.1	--	0.2	--	--
pH	standard units	--	--	--	6.5	8.0
Aluminum	µg/L	74	--	140	--	--
Bis (2-ethylhexyl) Phthalate	µg/L	1.8	--	4.1	--	--
	lbs/day	0.075	--	0.17	--	--
Chloroform	µg/L	26	--	--	--	--
	lbs/day	1.1	--	--	--	--
Chromium (VI), Total Recoverable	µg/L	8.1	--	16	--	--
	lbs/day	0.34	--	0.68	--	--
Copper, Total Recoverable	µg/L	2.4	--	4.5	--	--
	lbs/day	0.10	--	0.19	--	--
Cyanide, Total Recoverable	µg/L	4.3	--	8.5	--	--
	lbs/day	0.18	--	0.36	--	--
Diazinon	µg/L	0.040	--	0.080	--	--
	lbs/day	0.0017	--	0.0033	--	--
Dibenzo(a,h)anthracene	µg/L	0.0044	--	0.0088	--	--
	lbs/day	0.00018	--	0.00037	--	--
Dichlorobromomethane	µg/L	2.6	--	5.3	--	--
cis-1,2-Dichloroethene	µg/L	17	--	--	--	--
Iron, Total Recoverable	µg/L	300	--	--	--	--
Lead, Total Recoverable	µg/L	0.43	--	1.2	--	--
	lbs/day	0.018	--	0.052	--	--
Manganese, Total Recoverable	µg/L	50	--	--	--	--
Methylene Blue Active Substances	mg/L	30	--	--	--	--

1. Monitoring of EFF-002 for compliance with the effluent limitations is required until the treatment/disposal ponds located within the Feather River levees are permanently closed.
2. Based upon a design treatment capacity of 5.0 mgd.

Parameter[1]	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Nitrite	mg/L	1	--	--	--	--
(as N)	lbs/day	40	--	--	--	--
Nitrite + Nitrate	mg/L	10	--	--	--	--
(as N)	lbs/day	400	--	--	--	--
Oil and Grease	mg/L	10		15		
	lbs/day	420		630		
Organochlorine	µg/L	--	--	--	--	ND[3]
Pesticides	lbs/day	--	--	--	--	--
Tetrachloroethene	µg/L	21	--	56	--	--
Thiobencarb	µg/L	2.6	--	--	--	--
Zinc,	µg/L	21	--	43	--	--
Total Recoverable	lbs/day	0.88	--	1.8	--	--

a. **Percent Removal**: The average monthly percent removal of BOD 5-day biochemical oxygen demand (BOD) 20°C and total suspended solids (TSS) shall not be less than 85 percent.

b. **Electrical Conductivity**: The 30-day 90th percentile effluent electrical conductivity shall not exceed 780 µmhos/cm.

c. **Total Residual Chlorine**: Effluent total residual chlorine shall not exceed the following:

   i. 0.011 mg/L as a four-day average;
   ii. 0.46 lbs/day as a four-day average;
   iii. 0.019 mg/L as a one-hour average; and
   iv. 0.79 lbs/day as a one-hour average.

d. **Total Ammonia**: Effluent total ammonia (as N) shall not exceed the following from 1 April through 31 October:

   i. 1.22 mg/L as a monthly average;
   ii. 50.9 lbs/day as a monthly average;
   iii. 5.62 mg/L as a one-hour average; and
   iv. 234 lbs/day as a one-hour average.

3. The non-detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with the detection limits equal to or less than the lowest minimum level published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Plan or SIP), for the organochlorine pesticides listed in Appendix 4. For all other organochlorine pesticides, the Discharger shall use the lowest possible detectable level with a maximum acceptable detection level of 0.05 µg/L.

Total Ammonia: Effluent total ammonia (as N) shall not exceed the following from 1 November through 31 March:

v. 1.80 mg/L as a monthly average;
vi. 75.1 lbs/day as a monthly average;
vii. 5.62 mg/L as a one-hour average; and
viii. 234 lbs/day as a one-hour average.

e. **Average Dry Weather Flow**: **Prior to satisfaction of Provision C.2.a,** the average dry weather discharge flow shall not exceed 1.8 million gallons per day. **Upon satisfaction of Provision C.2.a,** the average dry weather discharge flow shall not exceed 5.0 million gallons per day.

f. **Turbidity**: Effluent turbidity shall not exceed the following:

i. 2 NTU as a daily average;
ii. 5 NTU more than 5 percent of the time within a 24-hour period; and
iii. 10 NTU at any time.

g. **Total Coliform Organisms**: Effluent total coliform organisms concentrations shall not exceed the following:

i. 2.2 MPN/100 m/ as a seven-day median;
ii. 23 MPN/100 m/ more than once in any 30-day period; and
iii. 240 MPN/100 m/ at any time.

h. **Mercury**: The total monthly mass discharge of total mercury shall not exceed 0.016 pounds/month.

i. In calculating for compliance, the Discharger shall count all non-detect results at one half of the method detection limit and shall apply the monthly total flow from the discharge. If compliance with the effluent limit is not attained due to the non-detect contribution, the Discharger shall improve and implement available analytical capabilities and compliance will be evaluated with consideration of the detection limits.

ii. The total pollutant mass load for each individual calendar month shall be determined using an average of all concentration data collected that month and the corresponding total monthly flow. All monitoring data collected under the monitoring and reporting program, pretreatment program and any special studies shall be used for these calculations.

i. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay - - - - - - - - - 70%
Median for any three or more consecutive bioassays - - - - 90%

E. **Interim Effluent Limitations**

As stated in the above Findings, the USEPA adopted the NTR and the CTR, which contains water quality standards applicable to this discharge and the SIP contains guidance on implementation of the NTR and CTR. The SIP, Section 2.2.1, requires that if a compliance schedule is granted for a CTR or NTR constituent, the Regional Water Board shall establish interim requirements and dates for their achievement in the NPDES permit. The interim limitations must: be based on current treatment plant performance or existing permit limitations, whichever is more stringent; include interim compliance dates separated by no more than one year; and be included in the Provisions. Interim limitations for nitrite, nitrate plus nitrite, and constituents with CTR/NTR-based final effluent limitations in this Order are based on the current treatment plant performance. Interim limitations for technology-based effluent limitations are based on permit limitations carried forward from Order No. 5-00-165.

Interim effluent limitations for constituents with CTR/NTR-based effluent limitations were based on the projected MEC (maximum detected effluent concentration) for each constituent. The projected MEC is determined by multiplying the observed MEC by a factor that accounts for statistical variation. The multiplying factor is determined (for 99% confidence level and 99% probability basis) using the number of results available and the coefficient of variation (standard deviation divided by the mean) of the sample results. In accordance with the SIP, non-detect results were counted as one-half the detection level when calculating the mean. The default coefficient of variation for constituents with fewer than ten samples and/or for which 80% or more of the sample results were non-detect is 0.6. Interim effluent limitation calculations were based on projection methods contained in the USEPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001].

$$p_n = (1 - confidence\ \ level)^{1/n} \quad C_{99} = (2.326\sigma - 0.5\sigma^2) \quad C_p = (z\sigma - 0.5\sigma^2)$$

where:

p_n = percentile represented by the highest concentration in the available data
n = number of available samples
C_{99} = numerator for projection factor
C_p = denominator for projection factor
σ^2 = $ln(CV^2+1)$
CV = coefficient of variation; calculated as the standard deviation divided by the mean
z = normal distribution value for p_n percentile
2.326 = normal distribution value for 99th percentile

The projected MEC is equal to the observed MEC multipled by $\frac{C_{99}}{C_{p_n}}$. Projected maximum effluent concentrations were set equal to interim average monthly effluent limitations. Projected MECs and intermediate calculation values are shown in the following table.

Constituent	Observed MEC (µg/L)	p_n	C_{99}	z	σ^2	C_p	Projected MEC/ AMEL (µg/L)
Bis (2-ethylhexyl) phthalate	22	0.6579	3.977	0.4068	0.4877	1.041	84
Chromium VI, Total Recoverable	23	0.7197	3.114	0.5819	0.3075	1.184	60
Copper, Total Recoverable	19	0.7356	2.823	0.6300	0.2498	1.209	44
Cyanide, Total Recoverable	38	0.7356	3.114	0.6300	0.3075	1.216	97
Dibenzo(a,h)-anthracene	0.11	0.5623	3.114	0.1569	0.3075	0.9354	0.37
Lead, Total Recoverable	1.0	0.7356	7.284	0.6300	2.415	1.078	6.8
Nitrate plus Nitrite (mg/L)[1]	34	0.8767	2.715	1.159	0.2291	1.553	60
Nitrite (mg/L) [1]	34	0.8767	2.715	1.159	0.2291	1.553	60
Zinc, Total Recoverable	91	0.7356	3.217	0.6300	0.3283	1.218	240

1. Based on same-day sums of discharger self-monitoring report ammonia, nitrate, and nitrite concentrations; maximum value was from 21 May 2002.

Interim limitations were also included for mass (lbs/day) limitations. Interim limitations for mass limitations were calculated using the design flow of the existing WWTP (1.8 mgd), while final limitations were calculated using the design flow of the proposed, upgraded WWTP (5.0 mgd).

F. **Land Discharge Specifications**

1. The Discharger utilizes ponds for the disposal of treated wastewater. Land Discharge Specifications have been included in this permit to assure that the ponds do not overflow or cause a nuisance. Nuisance conditions from ponds are typically found when strong odors occur when the dissolved oxygen concentration is allowed to drop below 1.0 mg/L. This permit requires the dissolved oxygen concentration be maintained above 1.0 mg/L in the upper one foot of water in the pond.

2. State Water Resources Control Board Water Quality Order (WQO) No. 2004-0013, states, in part:

> …the land discharge specification should be for discharges "into" the ponds rather than for pH in the ponds. The limitation is based on the pH water quality objective, but the ponds discharge only during inundation, at which times the receiving water limitation for pH would be protective.

In accordance with WQO No. 2004-0013, this permit does not include a pH limitation within the ponds. Instead, this permit requires the effluent discharged into the ponds to be within the range of 6.5 to 8.0 pH units.

3. Pond levees can fail for a variety of reasons, typically, a lack of maintenance or overtopping due to wave action. This permit requires a minimum pond freeboard be maintained to prevent overtopping.

4. The ponds are designed to percolate, which may have caused seepage of disinfected wastewater from the ponds into the Feather River and into the groundwater. In order to protect groundwater and surface water quality, the Discharger has proposed to close the pond system as a part of the expansion/improvement project. Elimination of the ponds, and therefore the percolation of wastewater, will protect groundwater water and surface water quality.

G. **Reclamation Specifications - NA**

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. The CWA, Section 303(a-c), required states to adopt numeric criteria where they are necessary to protect designated uses. The Regional Water Board adopted numeric criteria in the Basin Plan. The Basin Plan is a regulatory reference for meeting the state and federal requirements for water quality control (40 CFR §131.20). State Water Board Resolution No. 68-16, the Antidegradation Policy, does not allow changes in water quality less than that prescribed in Water Quality Control Plans (Basin Plans). The Basin Plan states that "[t]*he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses*." This Order contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives for fecal coliform, biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity and turbidity.

2. ***Fecal coliform***—The Feather River has been designated as having the beneficial use of contact recreation (REC-1). For water bodies designated as having REC-1 as a beneficial use, the Basin Plan includes a water quality objective limiting the "…*fecal coliform concentration based on a minimum of not less than five samples for*

any 30-day period…" to a maximum geometric mean of 200 MPN/100 ml. The objective also states that "…[no] *more than ten percent of the total number of samples taken during any 30-day period* [shall] *exceed 400/100 ml*." This objective is included in the Order as a receiving water limitation.

3. ***Dissolved Oxygen***—The Feather River has been designated as having the beneficial use of cold freshwater aquatic habitat (COLD). For water bodies designated as having COLD as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 7.0 mg/L of dissolved oxygen. Since the beneficial use of COLD does apply to the Feather River, a receiving water limitation of 7.0 mg/L for dissolved oxygen was included in the Order.

   For surface water bodies outside of the Delta, the Basin Plan includes the water quality objective that "…*the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation.*" This objective was included as a receiving water limitation in the Order.

4. ***pH***—For all surface water bodies in the Sacramento River and San Joaquin River basins, the Basin Plan includes water quality objectives stating that "[t]*he pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses*." The Order includes receiving water limitations for both pH range and pH change.

   The Basin Plan allows an appropriate averaging period for pH change in the receiving stream. Since there is no technical information available that indicates that aquatic organisms are adversely affected by shifts in pH within the 6.5 to 8.5 range, an averaging period is considered appropriate and a monthly averaging period for determining compliance with the 0.5 receiving water pH limitation is included in the Order.

5. ***Temperature***—The Feather River has the beneficial uses of both COLD and WARM. The Basin Plan includes the objective that "[a]*t no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5ºF above natural receiving water temperature*." The Order includes a receiving water limitation based on this objective.

6. ***Turbidity***—The Basin Plan includes the following objective: "*Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits*:

   - *Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.*
   - *Where natural turbidity is between 5 and 10 NTUs, increases shall not exceed 20 percent.*
   - *Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTU.*
   - *Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.*"

7. ***Ammonia and Chlorine***—USEPA has developed Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life for ammonia and for chlorine. The Order contains effluent limitations for ammonia and for chlorine equal to the Ambient Water Quality Criteria. Compliance with the effluent limitations for ammonia and for chlorine means that the discharge cannot cause an exceedance of the criteria in the receiving stream; in other words, the limitations are fully protective of water quality. Therefore, no receiving water ammonia or chlorine limitations are included in the Order.

B. **Groundwater**

1. The beneficial uses of the underlying ground water, as identified in the Basin Plan, are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

2. Basin Plan water quality objectives to protect the beneficial uses of groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity of groundwater, and taste and odor. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The Basin Plan requires the application of the most stringent objective necessary to ensure that groundwaters do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect municipal and domestic water supply, agricultural supply, or any other beneficial use.

3. State Water Resources Control Board (State Water Board) Resolution No. 68-16 (hereafter Resolution 68-16) requires the Regional Water Board in regulating discharge of waste to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board's policies (*e.g.*, quality that exceeds water quality objectives). Resolution 68-16 requires that

the discharge be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.

4. The Discharger utilizes disposal ponds. Domestic wastewater contains constituents such as total dissolved solids (TDS), specific conductivity, pathogens, nitrates, organics, metals and oxygen demanding substances (BOD). Percolation from the ponds may result in an increase in the concentration of these constituents in groundwater. The increase in the concentration of these constituents in groundwater must be consistent with Resolution 68-16. Any increase in pollutant concentrations in groundwater must be shown to be necessary to allow wastewater utility service necessary to accommodate housing and economic expansion in the area and must be consistent with maximum benefit to the people of the State of California. Some degradation of groundwater by the Discharger is consistent with Resolution 68-16 provided that:

   a. the degradation is limited in extent;

   b. the degradation after effective source control, treatment, and control is limited to waste constituents typically encountered in municipal wastewater as specified in the groundwater limitations in this Order;

   c. the Discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating best practicable treatment and control measures; and

   d. the degradation does not result in water quality less than that prescribed in the Basin Plan.

5. The Discharger has been discharging its effluent to unlined disposal ponds inside the flood protection levee of the Feather River. In June 2000, the Discharger conducted a hydraulic study of the ponds that indicated possible groundwater mounding beneath the disposal ponds and that effluent from the ponds may be seeping into the Feather River. Groundwater monitoring data shows that the groundwater electrical conductivity has been increasing beneath the ponds over at least the past five years.

   Based on the results of the study and the groundwater monitoring data, the discharge to the unlined disposal ponds have likely caused or contributed to degradation of the underlying groundwater. This Order requires the Discharger to close its existing disposal ponds.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting

requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this facility.

A. **Influent Monitoring**

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (*i.e.*, BOD and TSS reduction requirements).

B. **Effluent Monitoring**

1. The SIP states that if "…*all reported detection limits of the pollutant in the effluent are greater than or equal to the C* [water quality criterion or objective] *value, the RWQCB* [Regional Water Board] *shall establish interim requirements…that require additional monitoring for the pollutant….*" All reported detection limits for Hexachlorobenzene, 1,2-Benzanthracene, 1,2-Diphenylhydrazine, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 3,3'-Dichlorobenzidine, 3,4-Benzofluoranthene, Acenaphthylene, Benzidine, Benzo(a)pyrene (3,4-Benzopyrene), Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Bis(2-chloroethoxy) methane, Bis(2-chloroethyl) ether, Bis(2-ethylhexyl) phthalate, Chrysene, Dibenzo(a,h)-anthracene, Hexachlorocyclopentadiene, Indeno(1,2,3-c,d)pyrene, N-Nitrosodimethylamine, N-Nitrosodi-n-propylamine, Chromium (VI), Cyanide, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-Hexachlorocyclohexane (BHC), Aldrin, Chlordane, delta-Hexachlorocyclohexane, Dieldrin, Heptachlor, Heptachlor Epoxide, Toxaphene, Atrazine, Carbofuran, 2,3,7,8-TCDD (Dioxin) are greater than or equal to corresponding applicable water quality criteria or objectives. Monitoring for these constituents has been included in this Order in accordance with the SIP.

2. Pursuant to the requirements of 40 CFR §122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

C. **Whole Effluent Toxicity Testing Requirements**

The Basin Plan states that "[a]*ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances*." The Basin Plan requires that "[a]*s a minimum, compliance with this objective…shall be evaluated with a 96-hour bioassay*." This Order requires both acute and chronic toxicity monitoring to evaluate compliance with this water quality objective.

The receiving surface water for the Linda County Water District WWTP is the Feather River, an inland surface water providing freshwater aquatic habitat. Beneficial uses of the Feather River include warm freshwater habitat (WARM); cold

freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD). Given that the receiving stream has benefical uses of cold freshwater habitat, cold migration of aquatic organisms, and cold spawning, reproduction, and/or early development, it is appropriate to use a cold-water species such as *O. mykiss* (rainbow trout) for aquatic toxicity bioassays.

USEPA has approved test methods for of *Pimephales promelas*, *Selenastrum capricornutum*, and *Ceriodaphnia dubia* for assessing chronic toxicity in freshwater organisms.

The permitted discharge from the Linda County WWTP in combination with the permitted discharge from the Yuba City WWTF exceeds the flow of the Feather River during low flows. Therefore, the chronic toxicity test requires the use of both receiving water and laboratory water as diluents, in accordance with TSD Section 3.3.4.

D. **Receiving Water Monitoring**

1. **Surface Water**

a. Receiving water monitoring is necessary to assess compliance with receiving water limitations, to assess the impacts of the discharge on the receiving stream, and to assess the accuracy of the proposed mixing zone.

2. **Groundwater**

a. Section 13267 of the California Water Code states, in part, "(a) *A Regional Water Board, in establishing…waste discharge requirements… may investigate the quality of any waters of the state within its region*" and *"(b) (1) In conducting an investigation…, the Regional Water Board may require that any person who… discharges… waste…that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports*." The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports. The attached Monitoring and Reporting Program is issued pursuant to California Water Code Section 13267. The groundwater monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program are necessary to assess compliance with these waste discharge requirements. Linda County Water District is responsible for the discharges of waste at the facility subject to this Order.

b. Monitoring of the groundwater must be conducted to determine if the discharge has caused an increase in constituent concentrations, when compared to background. The monitoring must, at a minimum, require a complete assessment of groundwater impacts including the vertical and lateral extent of degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide best practicable treatment or control to comply with Resolution No. 68-16. Economic analysis is only one of many factors considered in determining best practicable treatment or control. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this permit may be reopened and modified. This Order contains groundwater limitations that allow groundwater quality to be degraded for certain constituents when compared to background groundwater quality, but not to exceed water quality objectives. If groundwater quality has been degraded by the discharge, the incremental change in pollutant concentration (when compared with background) may not be increased. If groundwater quality has been or may be degraded by the discharge, this Order may be reopened and specific numeric limitations established consistent with Resolution 68-16 and the Basin Plan.

c. This Order requires the Discharger to continue groundwater monitoring and includes a regular schedule of groundwater monitoring in the attached Monitoring and Reporting Program. The groundwater monitoring reports are necessary to evaluate impacts to waters of the State to assure protection of beneficial uses and compliance with Regional Water Board plans and policies, including Resolution 68-16. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater and surface water.

E. Other Monitoring Requirements

1. Pond Monitoring

Pond monitoring is required to assess compliance with land discharge specficiations. Additional monitoring of all ponds located within the Feather River levee is required to assess compliance with effluent and receiving water limitations.

Provision VI.C.2.h of this Order requires the Discharger to complete an annual monitoring study of the treatment/disposal ponds located within the Feather River levees until the ponds are permanently closed. The monitoring is required in order to determine if the discharge from the ponds causes exceedance of any narrative or numerical water quality objective contained in the Basin Plan including bacteria, biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, pH, pesticides, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity and any Effluent or Receiving Water Limitation contained in this Order. A receiving water mixing zone has not been approved for the pond discharge; therefore, if the Discharger does not have access to the ponds during flood stages, pond monitoring prior to inundation may be

conducted during the month of October. The report shall contain the results of the compliance sampling of the discharge from the ponds.

2. **Biosolids Monitoring**

Biosolids monitoring is required to ensure compliance with the biosolids disposal requirements (Special Provisions VI.C.6.a.). Biosolids disposal requirements are imposed pursuant to 40 CFR Part 503 to protect public health and prevent groundwater degradation.

3. **Water Supply Monitoring**

Water supply monitoring is required to evaluate the source of constituents in the wastewater.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D to the Order.

40 CFR §122.41(a)(a) and (b) through (n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR §123.25(a)(12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with Section 123.35, this Order omits federal conditions that address enforcement authority specified in 40 CFR §§122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC Section 13387(e).

B. Special Provisions

1. **Reopener Provisions**

a. Upon adoption of any applicable water quality standard for receiving waters by the Regional Water Board or the State Water Board pursuant to the CWA and regulations adopted thereunder, this permit may be reopened and receiving water limitations added.

2. **Best Management Practices and Pollution Prevention**

a. Storm water discharges from the WWTP are regulated under the General Permit for Discharges of Storm Water Associated with Industrial Activities (State Water Resources Control Board, Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001). The Discharger's waste discharge identification

(WDID) number for the storm water permit is 5S58I018267.

3. **Compliance Schedules**

The use and location of compliances schedules in the permit depends on the Discharger's ability to comply and the source of the applied water quality criteria.

a. For non-CTR-based Effluent Limitations, any necessary time schedules were generally included in the accompanying time schedule order.

b. The SIP, at Section 2.1, states that "[b]*ased on an existing discharger's request and demonstration that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the RWQCB may establish a compliance schedule in an NPDES permit*."

The SIP further states that "[t]*he discharger shall submit to the RWQCB the following justification before compliance schedules may be authorized in a permit: (a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and the results of those efforts; (b) documentation of source control and/or pollution minimization efforts currently underway or completed; (c) a proposed schedule for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable.*"

c. The Discharger submitted a request, and justification (dated 17 January 2006), for a compliance schedule for bis (2-ethylhexyl) phthalate, chromium (VI), copper, cyanide, dibenzo(a,h)anthracene, dichlorobromomethane, lead, tetrachloroethene, and zinc. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of Section 2.1 of the SIP. This Order establishes a compliance schedule for the new, final, water quality-based effluent limitations for bis (2-ethylhexyl) phthalate, chromium (VI), copper, cyanide, dibenzo(a,h)anthracene, dichlorobromomethane, lead, tetrachloroethene, and zinc and requires full compliance by **18 May 2010**.

4. **Construction, Operation, and Maintenance Specifications – NA**

5. **Special Provisions for Municipal Facilities (POTWs Only)**

a. **Pretreatment Requirements**

i. The source of pollutants which have been limited in this Order may be from industrial discharges. The Federal CWA, Section 307(b), and Federal Regulations, 40 CFR Part 403, require publicly owned treatment works to develop an acceptable industrial pretreatment program. Once the WWTP is permitted to 5 mgd, a pretreatment program will be required to prevent the introduction of pollutants which will interfere with treatment plant operations or

sludge disposal and prevent pass through of pollutants that exceed water quality objectives, standards or permit limitations in accordance with Federal Regulations, 40 CFR §403.8.

b. **Sanitary Sewer Overflow Requirements**

i. Sanitary sewer overflows consist of varying mixtures of domestic sewage, industrial wastewater, and commercial wastewater. This mixture depends on the pattern of land use in the sewage collection system tributary to the overflow. The chief causes of sanitary sewer overflows include lack of maintenance; blockages due to grease, roots, and debris; sewer line flood damage; manhole structure failures; vandalism; pump station mechanical failures; power outages; stormwater or groundwater inflow/infiltration; insufficient capacity; and contractor-caused blockages.

ii. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, and other pollutants. Sanitary sewer overflows can cause exceedance of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.

iii. The Discharger is responsible for all necessary steps to adequately maintain and operate its sanitary sewer collection system. This Order requires the Discharger to prepare and implement a Sanitary Sewer System Operation, Maintenance, Overflow Prevention, and Response Plan.

6. **Other Special Provisions**

a. After **21 September 2011** or completion of the new WWTP, this Order requires wastewater to be oxidized, coagulated, filtered, and disinfected, or equivalent treatment provided.

b. After **21 September 2011** or completion of the new WWTP, whichever is earlier, this Order prohibits the discharge of wastewater to treatment/disposal ponds located within the Feather River levees.

c. This Order requires the Discharger to use the best practicable treatment or control technique currently available to limit mineralization to no more than a reasonable increment.

d. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible

registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

e. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, this Order requires the Discharger to notify the Regional Water Board by telephone (916) 464-3291 (or to the Regional Water Board staff engineer assigned to the facility) within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Federal Standard Provision V.E.1 [*40 CFR §122.41(l)(6)(i)*].

f. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in the Federal Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, ***etc***.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.

g. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger must obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

h. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

   To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Federal Standard Provision V.B.5 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for Linda County Water District. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. A Notice of Public Hearing (NOPH) was prepared summarizing the project and Regional Water Board procedures. Notification was provided through direct mailing to agencies and known interested parties, posting of the NOPH at the Discharger's offices and the local post office and publication in the local newspaper.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order. To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on the date indicated in the transmittal letter for the proposed Order(s).

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Location: Central Valley Regional Water Quality Control Board, Sacramento Office
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is http://www.waterboards.ca.gov/centralvalley where you can access the current agenda for changes in dates and locations.

D. **Waste Discharge Requirements Petitions**

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. **Information and Copying**

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (916) 464-4645.

F. **Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. **Additional Information**

Requests for additional information or questions regarding this order should be directed to Amy Simpson at (916) 464-4761.